

Dún Laoghaire-Rathdown County Council

Infrastructure Capacity Assessment Study for Old Connaught and Rathmichael

Part 1 - Baseline Report



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1. Introduction

1.1 Purpose of the ICAS Study

Arup was commissioned by Dún Laoghaire-Rathdown County Council (DLRCC or “the County”) to complete a high-level strategic Infrastructural Capacity Assessment Study (ICAS) for the proposed Old Connaught and Rathmichael Local Area Plans (LAP) in the southeast area of the County.

The aim of the ICAS is to establish the existing context and capacities in the proposed LAP areas and to identify their constraints, challenges and opportunities. Following on from this, the ICAS will identify the proposed high-level strategic enabling infrastructure required to facilitate plan-led development of the proposed LAP areas of Old Connaught and Rathmichael. The strategic enabling infrastructure to be reviewed in this study includes:

- Transport
- Drainage, Water Services and Utilities; and
- Parks & Open Spaces, Green Infrastructure, Biodiversity and Heritage

1.2 Purpose and Scope of the Baseline Report

This report sets out a review of all disciplines within the LAP areas to form an understanding of the current situation for the ICAS study. This forms the baseline against which future scenarios and proposals can be measured against. An important outcome of the baseline is an understanding of the constraints and opportunities that will help inform the current and future needs of the two LAP areas. The constraints and opportunities identified in this report will also be used to inform the potential infrastructure needs to help support the future growth proposed in two LAP areas.

1.3 Report Structure

This report sets out all the baseline elements for the ICAS over the following chapters:

- Chapter 1 – Introduction.
- Chapter 2 – Strategic Context – a review of a vast array of relevant national, regional and local policies, plans and programmes.
- Chapter 3 – Baseline Assessment – an overview of outcomes from the data / information collated to establish the existing conditions and characteristics of the two LAP areas and its environs.
- Chapter 4 – Summary – a summary of all constraints and opportunities found in Chapter 3 and an analysis of the Strengths, Weaknesses, Opportunities and Threats (SWOT) for the two LAP areas.

1.4 Study Area

The study area is split into Rathmichael and Old Connaught, as shown in Figure 1-1. These align with the indicative boundaries for the proposed Local Area Plans.

The two LAP areas are located to the southeast of the County, with lands significantly rising in altitude from east to west and south to north. The M50 and M11/N11 generally runs along the eastern border of the two LAP areas with a portion of the Rathmichael LAP wedged between the M50 and N11 where these roads merge. To the north of the Rathmichael LAP area is the Cherrywood SDZ, Shankill to the east, Old Connaught LAP to the south, while Kiltiernan/Glenamuck lies to the northwest. To east of Old Connaught LAP area is Woodbrook/Shanganagh, to the southeast is Bray, Fassaroe to the south and Enniskerry to the west.

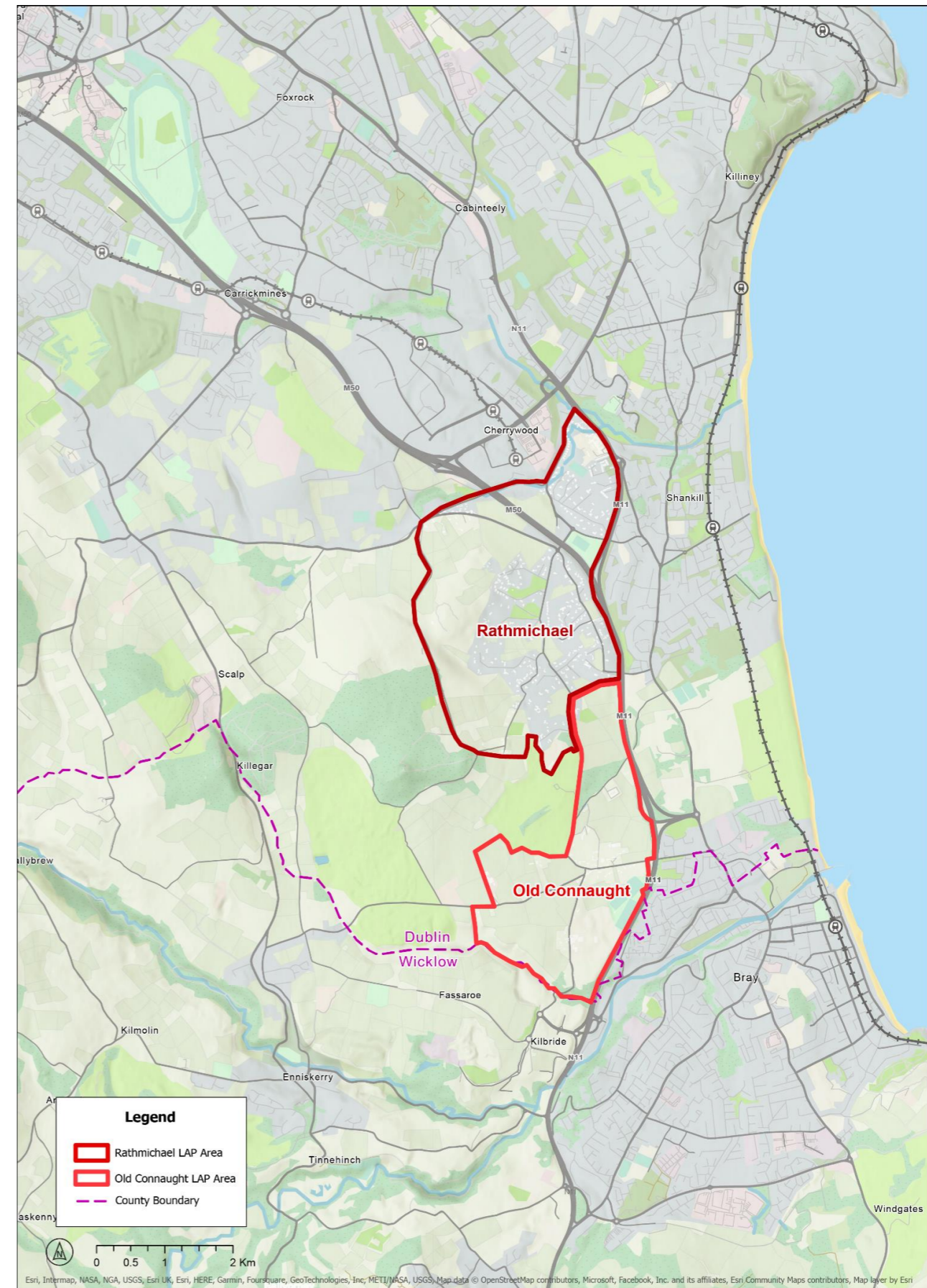


Figure 1-1 Old Connaught and Rathmichael LAP areas overview

1.5 Assessment Methodology

The assessment conducted as part of this Study will generally be structured in line with the Area Based Transport Assessment (ABTA) process. The methodology for this assessment follows the Area Based Transport Assessment (ABTA) Guidance Notes 2018 published by Transport Infrastructure Ireland (TII), along with the supplementary ‘ABTA How To Guide Pilot Methodology’ document prepared by TII and the National Transport Authority (NTA).

As part of this process, an initial baseline assessment is undertaken along with establishing context by identifying principles and objectives and establishing forecast demand. Following this, options are developed, which in this case are specific infrastructure or soft measures for each strategy. The Options Assessment is conducted utilising a Multi-Criteria Analysis (MCA), in which the options are compared based on criteria which are specific to the different strategies. The outcome of the MCA process informs the implementation and priority plan, with some schemes being discounted, and the remaining schemes being sorted by priority. Monitoring and Evaluation will be conducted following the implementation of the plan and the schemes therein.

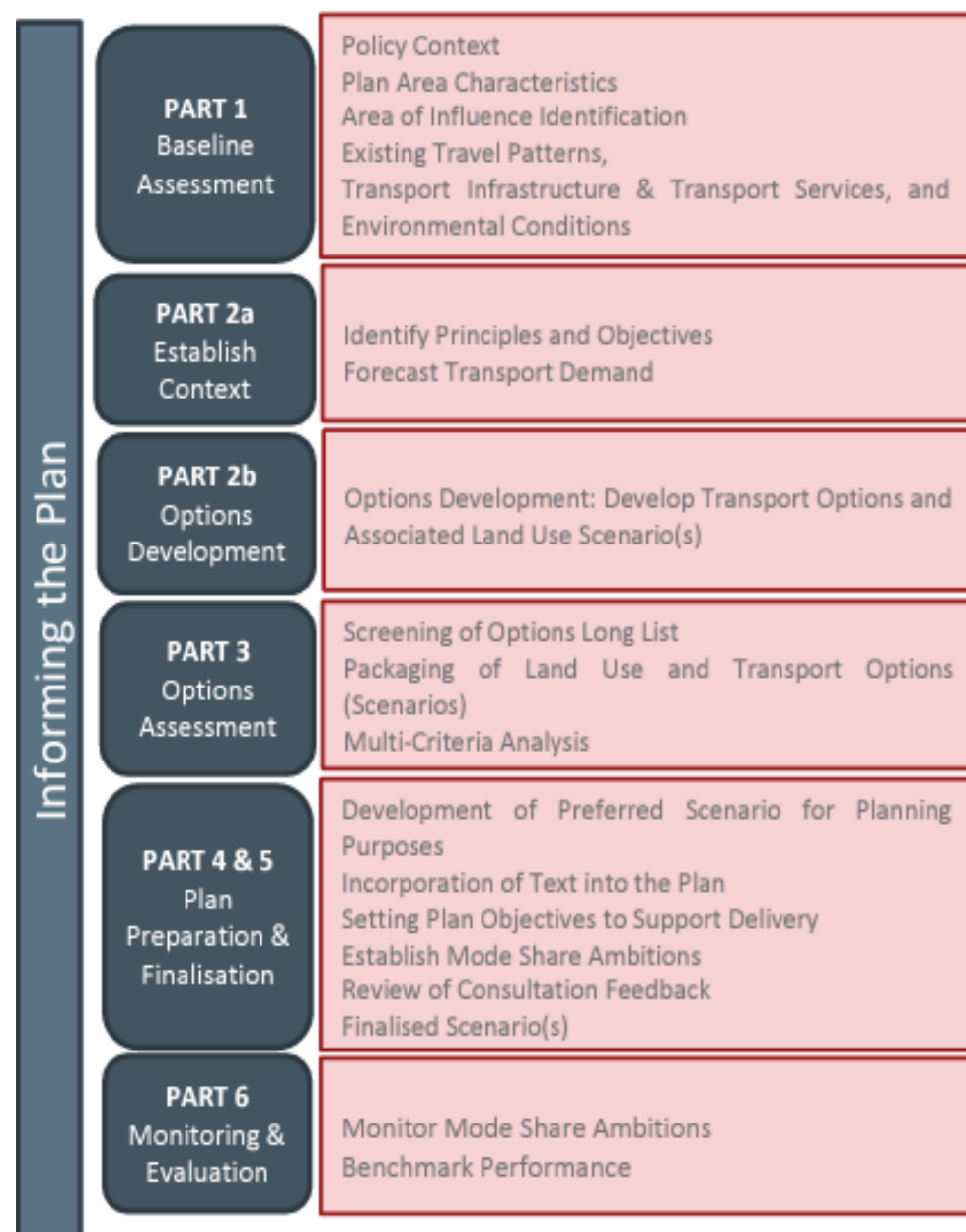


Figure 1-2 Area Based Transport Assessment (ABTA) Methodology

2. Strategic Context

2.1 Introduction

This section provides a summary of the key findings from a review of pertinent policies relating to the two LAP areas. A full policy review with long list policy objectives is included in Appendix A.

2.2 National Policy

Project Ireland 2040: National Planning Framework (NPF) highlights the need to develop local planning, transport/accessibility and leisure policies that address diverse population needs. It advocates for integrated land use, spatial and transport planning. It also promotes self-sustaining economic and employment-based development to match rapid housing delivery. Proportional employment-based developments must occur concurrently with the construction of housing units.

The **National Development Plan 2021-2030 (NDP)**, following on from the NPF specifies that up to 50% of future housing in the five cities and major urban centres and 30% elsewhere is to be provided within existing urban area footprints, serviced by existing facilities and high-capacity public transport corridors.

The two LAP areas are both within the existing built-up area of Dublin but are not currently serviced. They are both near the N11, a DART station with planning approval at Woodbrook, and the proposed Luas extension to Bray. Proportional employment development must be prioritised within or nearby to the two LAP areas. The development process of the two LAPs must integrate land use, spatial, and transport planning.

The **Climate Action Plan 2023 (CAP)** states that to achieve a 50% reduction in national transport emissions by 2030, public transport journeys must increase by 130% and active travel journeys must increase by 50%. It also states that climate solutions must be integrated into the country's social and economic development. The CAP has a major focus on improving building standards, aiming for all new buildings to meet the Zero Energy Building standard by 2030.

The **National Heat Study** suggests district heating could meet up to 50% of building heat demand. The plan sets volume targets for district heating and renewable gases for residential and commercial buildings, with energy efficiency measures to reduce demand.

The plan uses the Avoid-Shift-Improve framework to define a reduction in transport emissions by 2030. Avoid aims to reduce total vehicle kilometres travelled by 20%. Shift aims to increase active travel by 50% each day and public transport journeys by 130%. Improve aims to increase the percentage of low- and zero-emission vehicles in the fleet to reduce emissions from private vehicles.

Development at the two LAP areas must develop in a compact manner to reduce the need to travel, prioritise space for safe active travel and public transport, and support the charging/fuelling of electric or alternatively fuelled vehicles. Development at the two LAP areas must also be striving to meet Zero Energy Building standards.

The **National Investment Framework for Transport in Ireland (NIFTI)** provides further guidance to support the goals outlined in the CAP. It includes a road user hierarchy that prioritises walking and cycling followed by public transport and finally, private vehicles. It also includes an intervention hierarchy that prioritises the utilisation and optimisation of existing infrastructure over investment in infrastructure improvements or new infrastructure. Development at the two LAP areas must make the best use of existing infrastructure before proposing new or improved infrastructure.

Additionally, the **National Sustainable Mobility Policy** encourages integration of land use and transport planning, further cementing the need for integrated planning in the development of the two LAPs.

2.3 Regional Policy

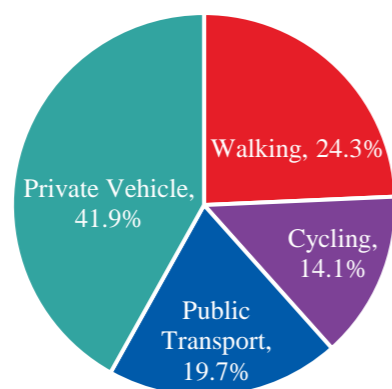
The **Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031 (RSES)** supports the NPF and NDP by providing a strategic planning and economic framework for the development in the Eastern and Midlands region.

The RSES classifies Bray as a Key Metropolitan Town, along with Swords and Maynooth, meaning it is important in a regional and county context and has capacity for above-average housing and employment growth in the region. The Old Connaught LAP area is included in Bray's growth targets, as it is contiguous with the Bray Municipal District along with Fassaroe to the south of the LAP area. The RSES indicates that delivery of the GDA Cycle Network, DART+ Programme, Luas expansion (Luas Bray), Core Bus Corridor (CBC) expansion (Bray-City Centre), and upgrades to the M11/N11 will enable sustainable growth within the Bray area.

Old Connaught and Fassaroe are targeted for new housing, employment and community facilities in the RSES as part of growth in Bray. Additionally, RSES policy objectives pin Bray town centre as a strategic employment location suited for regeneration of key sites in preparation of enhanced DART services and the completed Luas extension. The Old Connaught LAP area would need to be oriented towards Bray and Fassaroe to support the objectives of the RSES.

The RSES also includes a Metropolitan Area Strategic Plan (MASP), identifying Bray – Fassaroe (which includes Old Connaught) in a North-South (DART) Strategic Development Corridor. Further information on the MASP and additional RSES Regional Policy Objectives are included in Appendix A.

The **Greater Dublin Area (GDA) Transport Strategy 2022-2042** encourages transit-oriented development and dense, mixed-use neighbourhoods in the GDA. Residential development should be located within 1km of existing or planned public transport and within walking/cycling distance of current/future primary schools (2km) and secondary schools (3km). The strategy targets the following 24-hour travel mode share for the region in 2042, which new development must contribute to reaching:



- The GDA Transport Strategy advocates for the “Decide and Provide” method of transport investment, where a desired future should dictate the infrastructure that we provide, rather than the traditional “Predict and Provide” which uses historical trends to predict what the future will look like before providing infrastructure to meet that future. Transport infrastructure provided in the two LAP areas must contribute to the desired future state rather than historical transport trends in the area and support the mode share target above. The GDA Transport Strategy also has additional identified measures that impact upon the two LAPs, listed below with key parts bolded:
- **PLAN3-Housing and Transport:** Local Area Plans should be accompanied by appropriate Transport Plans or Transport Assessments setting out **how the plan or development minimises the need to travel and how PT, walking and cycling together can cater for the majority of travel demand.** They should also be accompanied by a statement setting out the infrastructure and services required to achieve this, and an agreed phasing programme for its provision.

- **PLAN4-Consolidated Development:** The NTA will support and prioritise development patterns in the GDA which seek to consolidate development as a means of preventing urban sprawl, reducing the demand for long-distance travel and maximising the use of existing transport infrastructure and services. **Peripheral development will be supported in exceptional circumstances – on an evidence-based planned approach – where located on high capacity public transport routes** and for specific land uses that cannot be accommodated in town and city centres.
- **PLAN9-Filtered Permeability:** Local Area Plans in the GDA should ensure that the **road and street networks in new development areas are designed on the basis of providing for filtered permeability,** and should incorporate measures which deliver filtered permeability in existing neighbourhoods.
- **LRT5-Luas Bray: Extend the Luas Green Line southwards** in order to serve the Bray and Environs area.
- **LRT9-Luas Green Line: Deliver significant additional capacity on the Luas Green Line** through the provision of additional fleet and necessary infrastructure.
- ROAD9-Regional and Local Roads Policy:
- 4. Develop appropriate road links to service development areas, including the provision of public transport (where required) and active travel facilities.
- 5. Enhance pedestrian and cycle safety through the provision of safer road junctions, **improved pedestrian crossing facilities** and the incorporation of appropriate cycle measures including signalised crossings where necessary.

A comprehensive list of policy objectives is included in Appendix A.

2.4 Local Policy

The **Dún Laoghaire-Rathdown County Development Plan 2022-2028 (DLR CDP)** zones much of the two LAP area lands as A1 Residential – “to provide for new residential communities and Sustainable Neighbourhood Infrastructure in accordance with approved local area plans”.

The DLR CDP expects that the Old Connaught LAP area can support 2,005 new residential units on 66.5 hectares of land and the Rathmichael LAP area can support 2,431 new residential units on 204 hectares of land. The DLR CDP advocates building at higher density, providing a diverse mix of amenities and improving connectivity for all travel modes to contribute towards the creation of more 10-minute neighbourhoods within the county. This will reduce the number and length of trips made and make the most of the infrastructure within the county. Development in the two LAP areas will need to consider how they will act as 10-minute towns within the county.

The DLR CDP is guided by five objectives shown below:



Development at the two LAP areas will endeavour to support these objectives completely. One objective of the DLR CDP is to deliver enabling infrastructure for development in the two LAP areas. This objective was informed by the **2019 Bray and Environs Transport Study**, which was followed by the **2021 Bray and Environs Transport Study**. The 2021 study identified the following enabling infrastructure for development at the two LAP areas:

- BusConnects/Core Bus Corridor
- Public Transport and Active Travel bridge from Fassaroe to Old Connaught
- Bus services west of N11/M11
- Woodbrook DART Station P+R
- N11/M11 Junction 4 to 14 Improvement Scheme
- Cycle infrastructure upgrades based on the Greater Dublin Area Cycle Network Plan

Additionally, the DLR CDP identifies new active travel links over the M11/N11 to be provided at the following locations:

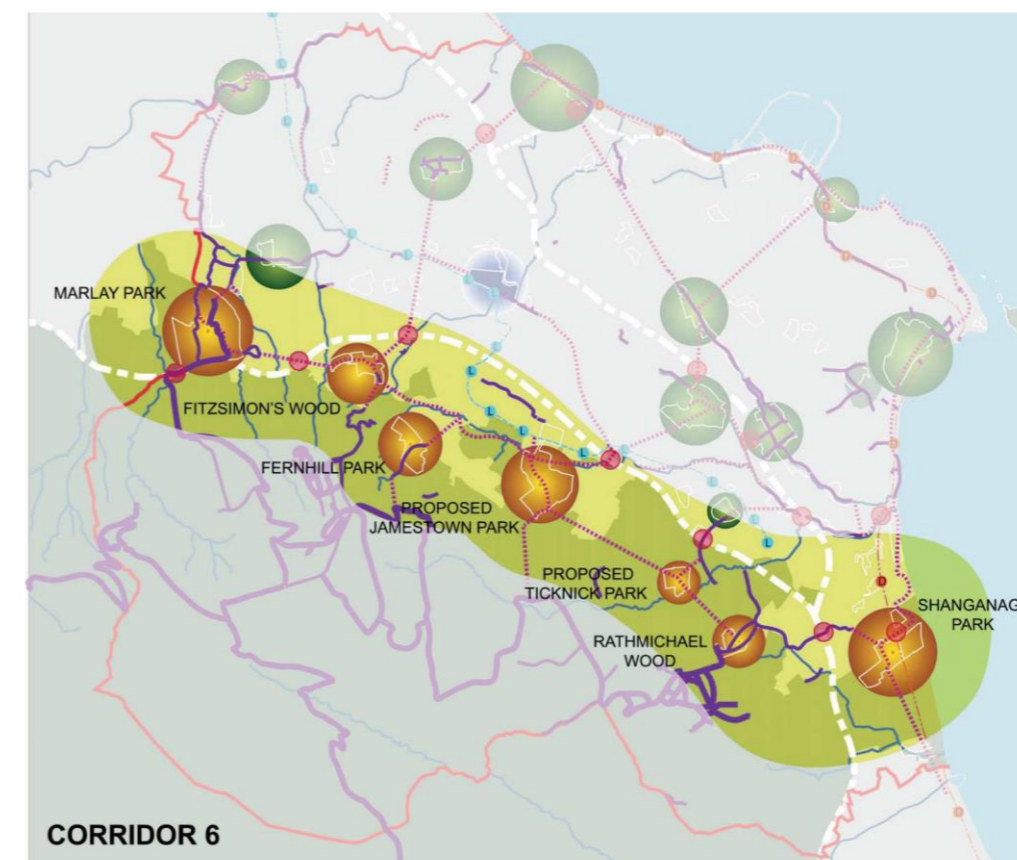
- In the vicinity of Allies River Road
- Love Lane Bridge

The infrastructure in the two lists above is shown in Figure 2-1. This infrastructure should be considered for inclusion in the two LAPs.

Additionally, the DLR CDP includes a Green Infrastructure Strategy. The strategy includes a high level, county-wide network of integrated green infrastructure, connected to surrounding and regional green infrastructure networks. In particular, the Green Infrastructure Strategy identifies a chain of ‘gateway hubs’ (major parks and gardens) to transition and provide access between the urban area and the Dublin Mountains. One of these ‘gateway hubs’ is Rathmichael Wood, which is shown below. Development in the Rathmichael LAP area will need to protect this area as a county amenity and enhance the green infrastructure network.

¹ https://www.dlrcoco.ie/sites/default/files/atoms/files/appendices_1-13.pdf

Additional Biodiversity policy objectives are applicable to the two LAP areas and are included in Appendix A.



Landscape Character Assessments were undertaken for Rathmichael and Ballyman (which mentions Old Connaught) and are included in Appendix 8 of the County Development Plan¹. The principles for development based on this landscape character assessment inform landscape protection measures, landscape management to maintain or enhance character and guide decision making on development that individually or cumulatively changes the character of a place

Specific DLR CDP policy objectives applicable to the two LAP areas are included in Appendix A, with some of the most relevant objectives listed below:

- SLO 86: To prepare a Local Area Plan for Rathmichael.
- SLO 105: To prepare a Local Area Plan for Old Connaught.
- SLO 150: To allow for the provision of a new pedestrian and cycle link via a new combined foot and cycleway bridge from Rathmichael Road towards the Luas station at Cherrywood Business Park passing under the existing M50 motorway bridge and crossing the R116 Brides Glen Road and valley.
- T1-Integration of Transport and Land Use Policies: Actively support sustainable modes of transport and ensure that land use and zoning are aligned with the provision and development of high quality public transport systems.
- T3-Delivery of Enabling Transport Infrastructure: Support the delivery of enabling transport infrastructure so as to allow development take place in accordance with the Core Strategy of this Plan and the settlement strategy of the RSES. (Consistent with RPO 4.40, 10.2, 10.3, 10.11, 10.16 of the RSES).

- T9-Luas Extension and Metrolink: Promote, facilitate and cooperate with other agencies in securing the extension of the Luas network in the County as set out in the NTA’s ‘Greater Dublin Area Transport Strategy 2016-2035’ and including any future upgrade to Metro. (Consistent with RPO 4.40 and 8.8 of the RSES)

The Council will protect and safeguard the provisional alignment and surrounding lands, of Luas Line B2 as detailed on Map Nos. 10 and 14. The Council will maintain this proposed route free from development and any encroachment by inappropriate uses which could compromise the future development of this rail corridor for public transport facilities.

The route of a proposed indicative Luas Spur from Old Connaught Avenue to Fassaroe, Bray as shown on Map 14 shall be further considered and informed by and in the context of the next Transport Strategy for the Greater Dublin Area.

Specific roads objectives are also identified in the development plan. Six-year roads objectives in the area include:

- M50 Cherrywood Interchange to Rathmichael – new link road Ferndale Road
- Link from Ferndale Road to Dublin Road

Long-term roads objectives in the area include:

- M50 Third Lane (Sandyford Interchange to M11)
- M50 Western Parallel Road from Old Connaught to Cherrywood Environs
- Rathmichael Road

The **Woodbrook-Shanganagh LAP 2017-2023** area is directly to the east of the two LAP areas and has the potential to deliver 1,600-2,300 new homes on 31 ha of residential lands.

These lands are activated for sustainable development by the Woodbrook DART station, which has been granted planning permission and is located just over 1km east of the Old Connaught LAP area. The plan also identifies a future pedestrian/cycle route over the N11 at Allies River Rd, providing a sustainable connection between Old Connaught and the Woodbrook – Shanganagh area. Development in the Old Connaught LAP area will need to support access to this link to encourage active travel across the N11/M11 to the Woodbrook-Shanganagh LAP area and the Woodbrook DART station.

Other LAPs and Strategic Development Zones (SDZs) have been developed nearby:

The **Ballyogan & Environs LAP 2019-2025** covers an area located approximately 2km northwest of the Rathmichael LAP area. It has 74 hectares of undeveloped land zoned “A – To protect and/or improve residential amenity”, which will allow the population of the Ballyogan LAP area to approximately double. Stepside and Carrickmines are identified as new neighbourhood centres, which may be destinations for residents of the Rathmichael and Old Connaught LAP areas for shopping, services and employment. Enabling transport infrastructure in the Ballyogan LAP area includes the Kiltiernan Link Road crossing the M50 and connecting Carrickmines Quarter to Cherrywood, and a Gold Lane Link connecting the Ballyogan Stream greenway to the Kiltiernan Link Road.

The **Kiltiernan-Glenamuck LAP 2018-2023** covers an area located approximately 2.5km northwest of the Rathmichael LAP area. Development of 2,600-3,000 units is anticipated in the Kiltiernan-Glenamuck LAP area.

The **Cherrywood SDZ** area is located directly north of the Rathmichael LAP area. Cherrywood’s employment and retail centres as well as Luas stops will be significant destinations for residents of the two LAP areas. Three active travel links are proposed in this scheme connecting Cherrywood (and the Brides Glen Luas stop) to the Rathmichael LAP area along Brides Glen Rd. One of these connections is being made over the Cherrywood Viaduct, with further connection to Dublin Road at the roundabout with the M11. The Kiltiernan Link Road which crosses the M50 is included in this plan as well.

The impact upon these surrounding areas of any proposed infrastructure in the surrounding LAP areas will have to be taken into consideration in the LAP process.

The **Wicklow County Development Plan 2022-2028 (Wicklow CDP)** classifies Fassaroe as a strategic site, and links it with Old Connaught as sites for development within the Bray Municipal District. The Wicklow CDP identifies the following enabling infrastructure for development at Fassaroe:

- N11 Cycle and Pedestrian Bridge
- N11/M11 Junction 4 to 14 Improvement Scheme
- Delivery of Wicklow County Council Part 8 N11 capacity and safety upgrades
- Public Transport and Active Travel bridge from Fassaroe to Old Connaught over County Brook at Ballyman Glen
- Traffic Management Measures at Fassaroe Interchange to protect strategic function of the N/M11
- Commitment to the phased introduction of bus and enhanced rail services in line with increased demand

The infrastructure above is largely in line with Dún Laoghaire-Rathdown’s identified enabling infrastructure. Coordination between the two counties will be necessary for development of the Old Connaught LAP area and Fassaroe.

2.5 Other Key Policy Documents

In line with the Bray and Environs Transport Studies and the Dún Laoghaire-Rathdown and Wicklow Development Plans, the **M11/N11 Corridor Study Needs Assessment Report 2017** proposed increasing the capacity of the M11/N11 to alleviate congestion. This resulted in the N11/M11 Junction 4 to 14 Improvement Scheme. This scheme was brought to Phase 2: Option Selection Report before being paused indefinitely.

The **N11/M11 Bus Priority Interim Scheme** is currently underway as an alternative method of increasing the capacity of the N11/M11 around the project area. The project is expected to bring bus lanes to the northbound and southbound lanes of the N11/M11 between the Loughlinstown roundabout to Junction 8. The two LAP areas may have access to bus lanes along the N11/M11, allowing for more consistent travel times and more attractive public transport both north and south along the N11/M11.

The **Bray Municipal District LAP 2018-2024** plans for the development of a new mixed-use centre at Fassaroe, which borders Old Connaught to the south. The plan includes objectives of an access road between the N11 and Ballyman Road as well as an additional link between this new access road and Old Connaught Avenue. The nature and function of this link has not yet been determined. This access road and additional link should be considered in development of the two LAPs.

2.6 Key Projects and Schemes

BusConnects Dublin will provide a CBC and associated cycle facilities to the east of the N11 serving Shankill and Bray. The Luas Extension to Bray is proposed to extend from Brides Glen to Bray DART Station however this is subject to a future options selection process. The current indicative alignment runs from Brides Glen across the Cherrywood Viaduct and continues to the eastern side of the M11 where it travels south parallel to the M11. North of Junction 5, it is proposed to cross over the M11 to the western side before reaching Old Connaught Avenue, at which point it is proposed to run eastbound across the M11 bridge, turning south along Dublin Road, and onwards through Bray to the DART Station. The extension is forecasted to be completed prior to 2042.

The Woodbrook DART station has been granted planning permission to serve the proposed development in the Woodbrook-Shanganagh LAP Area.

A new road link is proposed connecting the N11 westwards through Fassaroe with a connection between Fassaroe and Old Connaught.

A Park and Ride is proposed adjacent to the N11/R918 Junction, just south of the Old Connaught LAP area.

The N11/M11 Bus Priority Interim Scheme is currently underway as an alternative method of increasing the capacity of the N11/M11 around the project area. The project is expected to bring bus lanes to the north and southbound lanes of the N11/M11 between the Loughlinstown roundabout to Junction 8.

Active travel connections are proposed over the M11/N11 at Allies River Road and Love Lane, and under the M50 at Brides Glen Road/R116.

The projects and schemes are summarised in Figure 2-1.

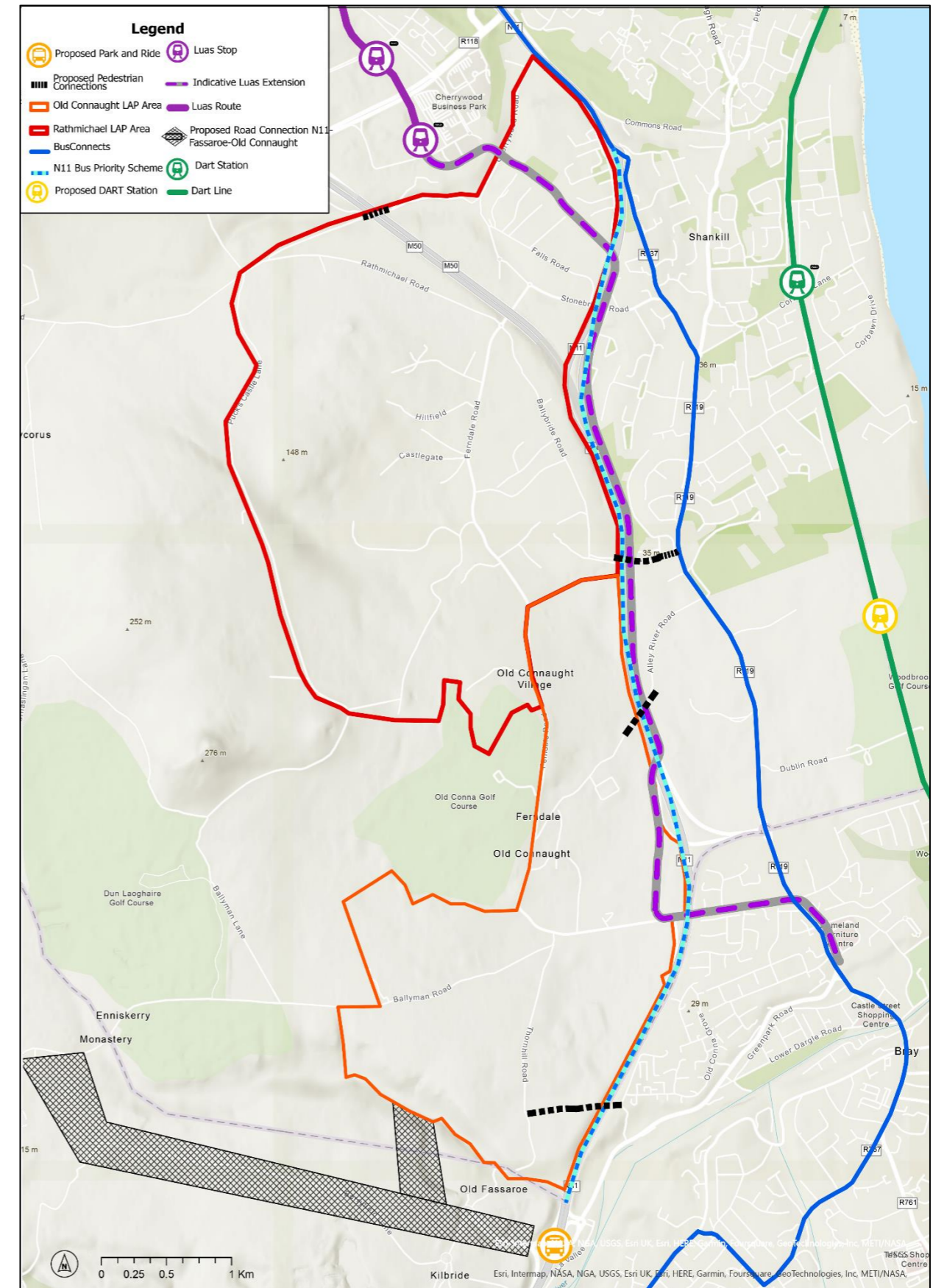


Figure 2-1 Proposed Key Projects and Schemes

3. Baseline Assessment

3.1 Land Use and Spatial Planning

3.1.1 Core Strategy

Old Connaught and Rathmichael are identified as new residential communities in the settlement strategy of the Dún Laoghaire-Rathdown County Development Plan (CDP) 2022-2028. Old Connaught is identified in the Regional Spatial and Economic Strategy (RSES) for future growth as part of the westward expansion of the 'Key Town' of Bray. This designation is further supported by the Dublin Metropolitan Area Strategic Plan (MASP) which identifies Old Connaught on the North-South (DART) strategic development corridor. Old Connaught and Rathmichael are not currently serviced, and the future development of these areas is contingent upon the timely delivery of supporting infrastructure. High-level implementation plans incorporating phasing programmes are due to be prepared as part of the Local Area Plan (LAP) making process for both new communities, linking development with the commensurate delivery of supporting infrastructure. Figure 3-1 illustrates the Core Strategy Map indicated in Chapter 2 of the 2022-2028 CDP, which identifies the development of new residential communities for the two proposed LAPs within the wider context.

In the context of the NPF, the Residential Development Capacity Audit requires a tiered approach to differentiate between zoned land that is serviced (Tier 1) or that is serviceable in the lifetime of the Plan (Tier 2). Old Connaught and Rathmichael are Zoning Tier 2. The Proposed Residential Yield is 2,005 for Old Connaught and 2,431 for Rathmichael.

In accordance with the NPF and the RSES, the Elected Members of the Regional Assembly approved a transitional population allowance of 13,000 for the Key Town of Bray, 3,500 of which is applicable to the DLR administrative area.

In accordance with the infrastructure assessment of Tier 2 zoned residential lands the full build-out of existing residential zoned land at Old Connaught is incorporated into the Core Strategy for the Plan period 2022-2028. However, a portion of the 3,500 persons allocation is thus subsumed into the delivery of existing zoned lands at Old Connaught up to 2028. In order to provide for the residual population allocated under NPO 68, the strategic land reserve reflects the period Q2 2028 to 2031 which equates to an additional 2,625 persons or approximately 1,050 residential units (average household size estimated at 2.5).

The RSES provides a further elaboration on foot of NPO 68 and states that the transitional population targets in NPO 68 shall apply to the three Metropolitan Key Towns in the MASP, namely Bray, Maynooth and Swords, and only if they can demonstrate compact growth on high capacity planned or existing public transport corridors. In accordance with the NPF and the RSES, the Elected Members of the Regional Assembly approved a transitional population allowance of 13,000 for the Key Town of Bray, 3,500 of which is applicable to the DLR administrative area. The 3,500 re-allocation of population is applied to the 2031 high growth scenario of the RSES and as such, in part, falls outside the timeframe of the County Development Plan. Given the regional designation and specific population allocation for the Key Town of Bray it is considered appropriate to identify a potential 'strategic land reserve' to meet the designated future growth beyond the timeframe of the Plan period of 2028.

The lands identified as a strategic land reserve are located to the north of Old Connaught are zoned greenbelt land. The lands comprise c. 38 hectares and include significant provision for educational, open space and recreational facilities. Parts of the lands comprise existing residential development which are subsumed into the overall strategic land reserve. With regards to greenbelts, reference is made to NPO 62 of the NPF which identifies the role of greenbelts to include for, inter alia, the long-term strategic expansion of urban areas. The lands identified as strategic land reserve are not categorised as either Tier 1 or Tier 2 lands, as per the infrastructure assessment contained in Appendix 1 of the Development Plan.

The lands are not zoned for residential development and as such are not included in the Core Strategy for calculation purposes. Furthermore, while the subject lands are identified as a strategic land reserve it does not confer any future zoning status. The Development Plan notes that regard shall be had to this reserve in the future Old Connaught Local Area Plan.

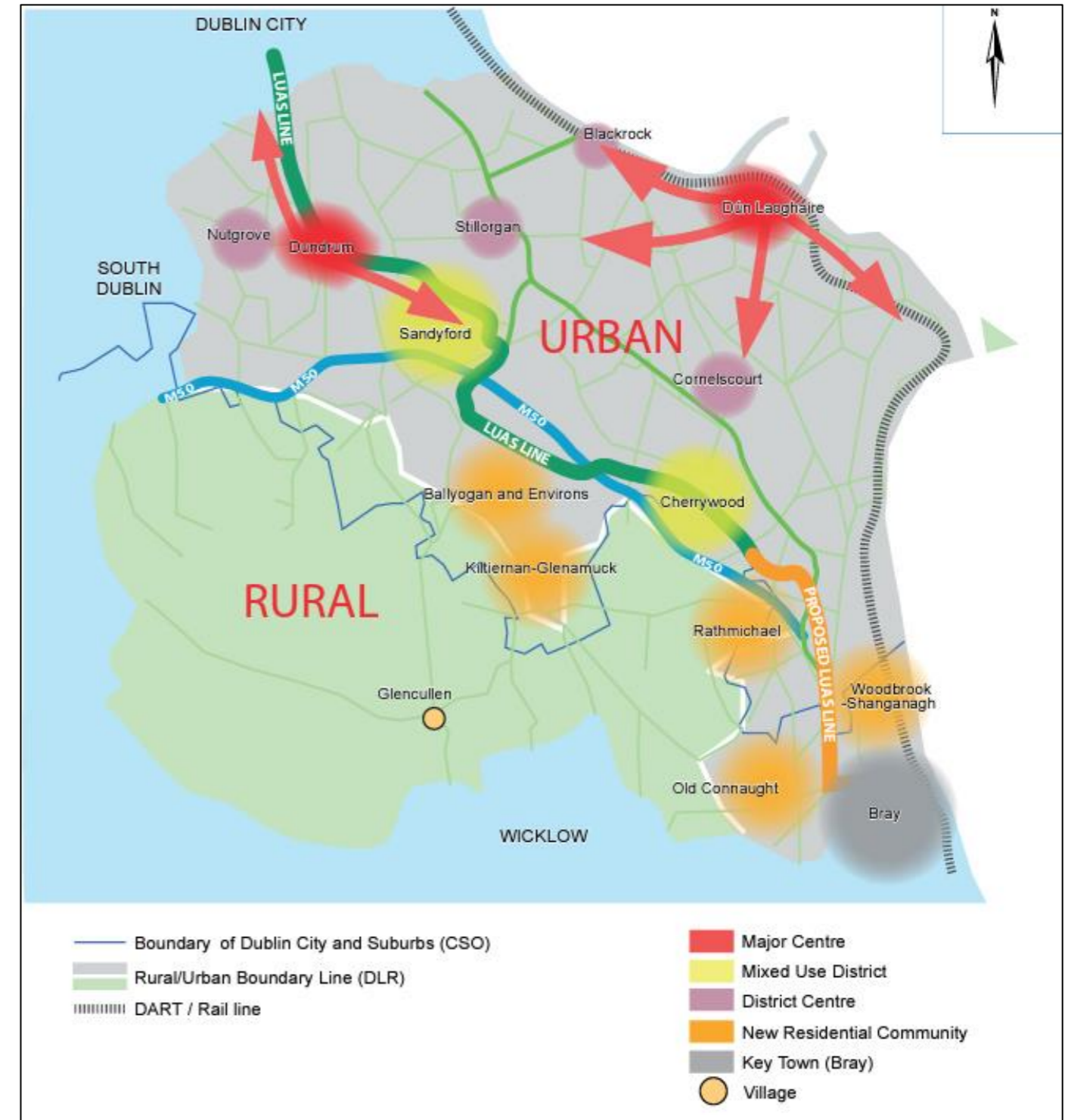


Figure 3-1 DLRCC Core Strategy Map (Dún Laoghaire-Rathdown Development Plan 2022 - 2028)

3.1.2 Zoning

The majority of the land within the two LAP areas are zoned Objective A1 which is “To provide for new residential communities and Sustainable Neighbourhood Infrastructure in accordance with approved local area plans”. This designation is under the LAP programme where the Council intends to prepare Local Area Plans for both Old Connaught and Rathmichael. To note, some of the areas zoned for new residential are presently fully or partially built on, generally with low-density housing.

Along with Objective A1 zoned objective 'GB', “To protect and enhance the open nature of lands between urban areas”; 12 hectares are zoned objective 'F', “To preserve and provide for open space with ancillary active recreational amenities” and 0.44 hectares are zoned 'SNI', “To protect, improve and encourage the provision of sustainable neighbourhood infrastructure” which covers Rathmichael Church and St Columcille’s Hospital, Loughlinstown and St Kieran’s Special School in Old Connaught. An area of 38 hectares has been identified as a Strategic Land Reserve in the ‘GB’ zoning and the County Development Plan states that this land shall be regarded within the future Old Connaught LAP.” In addition, a proposed Education Site objective is indicated in the Old Connaught LAP area.

Figure 3-2 shows the land use zoning as part of DLRCC Development Plan 2022-2028.

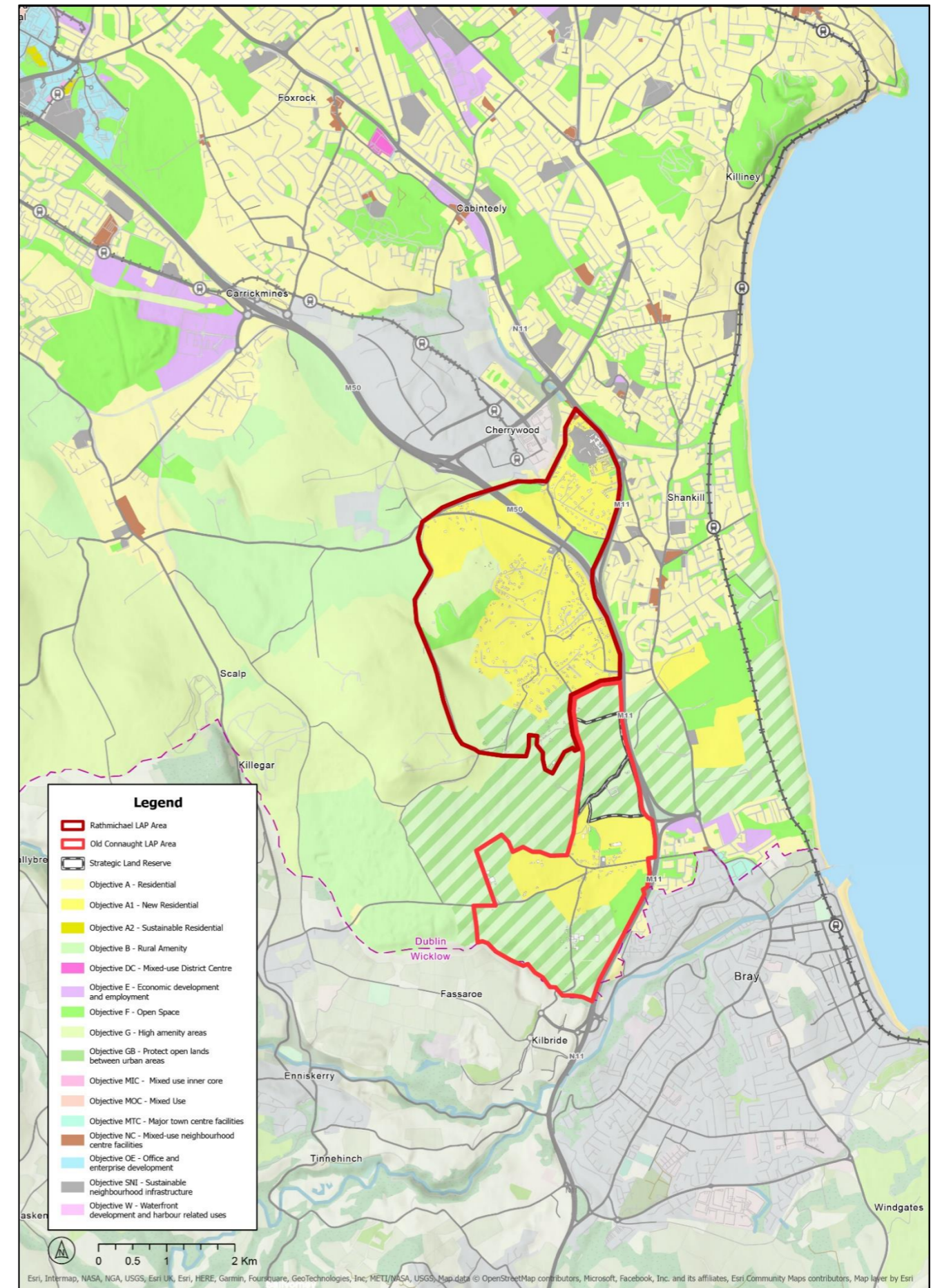


Figure 3-2 DLRCC Zoning Map (Dún Laoghaire-Rathdown Development Plan 2022 - 2028)

3.1.3 Adjacent Development Lands

The two LAP areas are bound by three other major development sites, each at varying stages of completion: Cherrywood, Woodbrook and Fassaroe. These are described below.

The Cherrywood SDZ, which lies immediately to the north of the area, was adopted in 2014 and is currently under construction with some elements completed and in operation. The overall site is approximately 360 hectares in size and will provide a mixed-use sustainable development with a commercial town centre, office space, and nearly 10,000 residential units upon completion. Cherrywood is served by the Luas green line, with four operational stops located within the lands. The current southern terminus, the Brides Glen stop, is located just 250m from the northern boundary of the Rathmichael LAP area.

The Woodbrook LAP lies to the North East of the indicative boundary of the Old Connaught LAP area, and spans between the M11 to the west and the sea to the east, and between Shankill to the North and Bray to the South. The LAP proposes primarily residential land uses, with elements of mixed-use, commercial, and education uses also proposed. As part of the LAP, a new DART station is proposed roughly equidistant between Bray and Shankill stations, which will serve the site and future development in the nearby area. Both Cherrywood and Woodbrook lie within Dún Laoghaire-Rathdown County Council’s administrative area.

The Ballyogan and Environs LAP (BELAP) area lies to the north and east of Cherrywood and the south of lies the Kiltiernan / Glenamuck LAP area. The primary land use within the BELAP area will remain residential with supporting facilities, housing mix and connections to adjacent communities. The overall strategy of the Kiltiernan / Glenamuck LAP is to provide a neighbourhood framework plan to consolidate the village core and the graduation of residential densities from higher densities adjacent to the Luas line to lower densities further from the main public transport artery.

The Fassaroe development lands directly border the Old Connaught LAP area to the south. These lands, within Wicklow County Council’s (WCC) jurisdiction, are targeted to be developed as a mixed residential, open space, community and employment area with the potential to meet up to 60% of Bray’s new housing need.

The following is noted in WCC’s Bray Municipal District LAP 2018 – 2024:

“The development of this area shall include the provision of an access road from the N11 to Ballyman Road; the scale of such a route shall reflect its primary function as a service road for a new neighbourhood, rather than that of a ‘by-pass’; the design and location of this route shall not affect the functionality of the major open space as a single park and an innovative design solution where park crossing is necessary will be required; access to the lands zoned for new residential in SLO-10 at Monastery shall be from Ballyman Road and any access road shall be designed to form an element of the future Fassaroe – Monastery link road.

Provision shall be made (unless necessity for same has been definitely ruled out by the transport agencies) for a north – south link route from the new distributor road to cross Ballyman Glen and continue into County Dublin and link up with old Conna Avenue. The nature and function of this link i.e. the type of traffic it will carry (vehicles / pedestrian / cyclist / light rail) shall be determined at application stage, following consultation with the transport agencies and the neighbouring local authority”

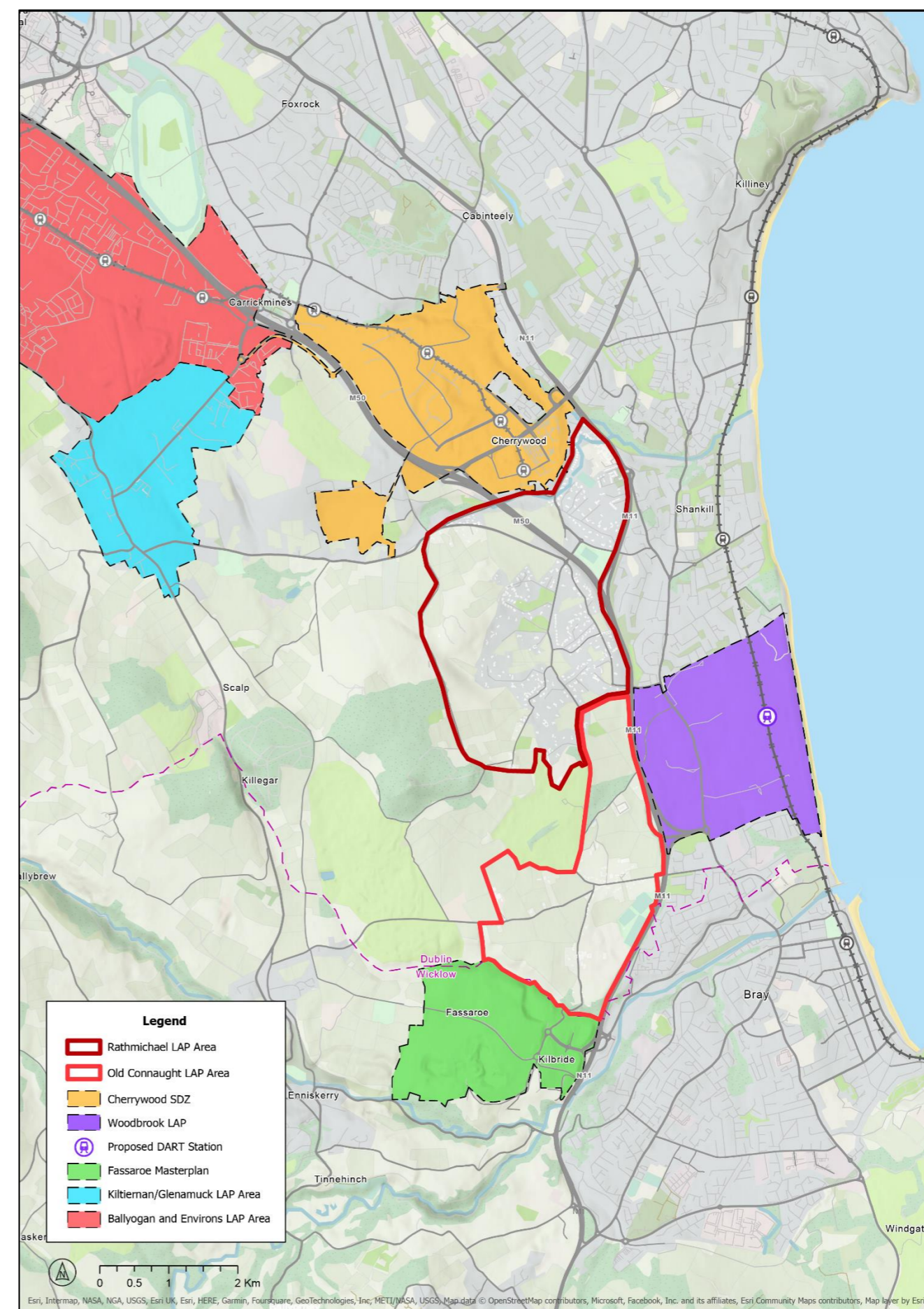


Figure 3-3 Adjacent development lands

3.1.4 Social infrastructure and trip attractors

Figure 3-4 shows the local trip attractors in the two LAP areas and surrounding areas of Bray, Shankill, Cherrywood, Cabinteely Kilternan and Enniskerry. The purpose of this map is to show the limited social infrastructure within the two LAP areas compared to those in the surrounding areas. This means that current residents tend to travel outside of the boundaries of the LAP areas to adjacent areas or beyond resulting in longer distance trips. Due to the low-density development (large properties) within the LAP areas and limited active mode infrastructure and public transport, the greater majority of these trips are by car.

The primary and post-primary school data has been supplied by DLRCC, while the third level, kindergarten, retail points, places of worship, and hospital/medical facilities were obtained from OpenStreetMap. Note that this dataset does not necessarily include every location that exists, due to the open source nature of OpenStreetMap (e.g. Festina Lente).

For retail and leisure facilities, residents in the two LAP areas can utilise facilities in the developed centres of Bray to the south and Shankill to the northeast.

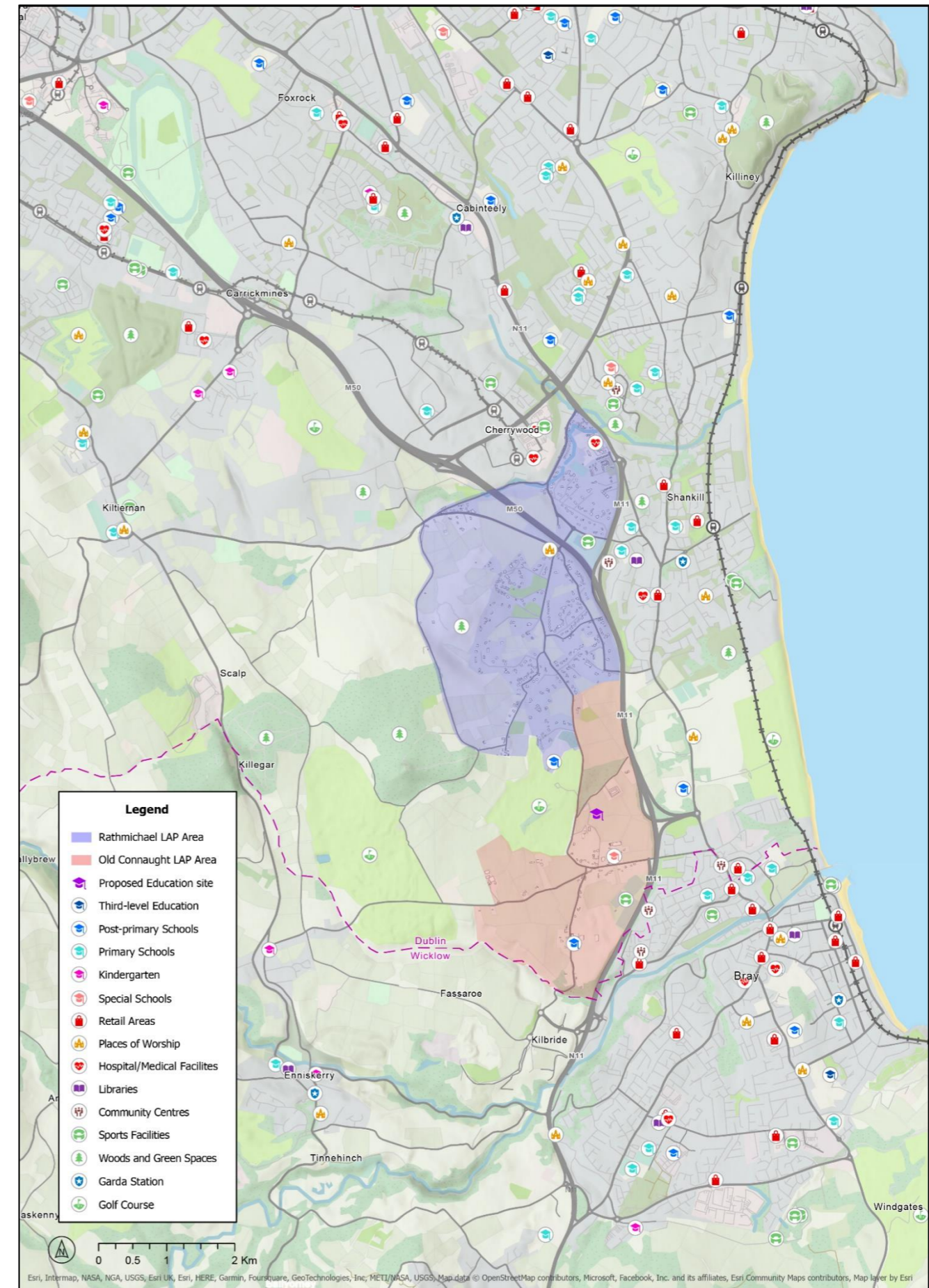


Figure 3-4 Trip Attractors in the surrounding area

3.1.5 Population Density

The population density of the two LAP areas and surrounding areas derived from Census 2016 Small Area Population Statistics (SAPS) is shown in Figure 3-5. The data is presented at 'Small Area' level which is designated as the lowest level of geography for the compilation of statistics in line with data protection, and generally consists of between 80 and 120 dwellings. It should be noted that Census 2022 data is only currently available at an Electoral Division (ED) level and therefore was not included in this baseline analysis.

Note that the 2022 Census data is due to be published for SAPS on 21st September 2023, which will provide a more up-to-date baseline scenario for the two LAP areas.

The overall population levels for each of the Small Areas were divided by the associated area to identify the most densely populated regions of the settlement (population per square kilometre). It should be noted that where areas of significant physical extent are being considered for development plans, the use of aggregated data is likely to be appropriate. The SAPS data may however be helpful in identifying any locations of high demand density arising from activities such as employment or leisure within LAP areas. This will assist with the refinement of options at subsequent stages of the assessment process.

Both LAP areas have low population density, with less than 1,000 persons per km². This is in clear contrast with the areas immediately to the east of the M11, where population densities of over 10,000 persons per km².

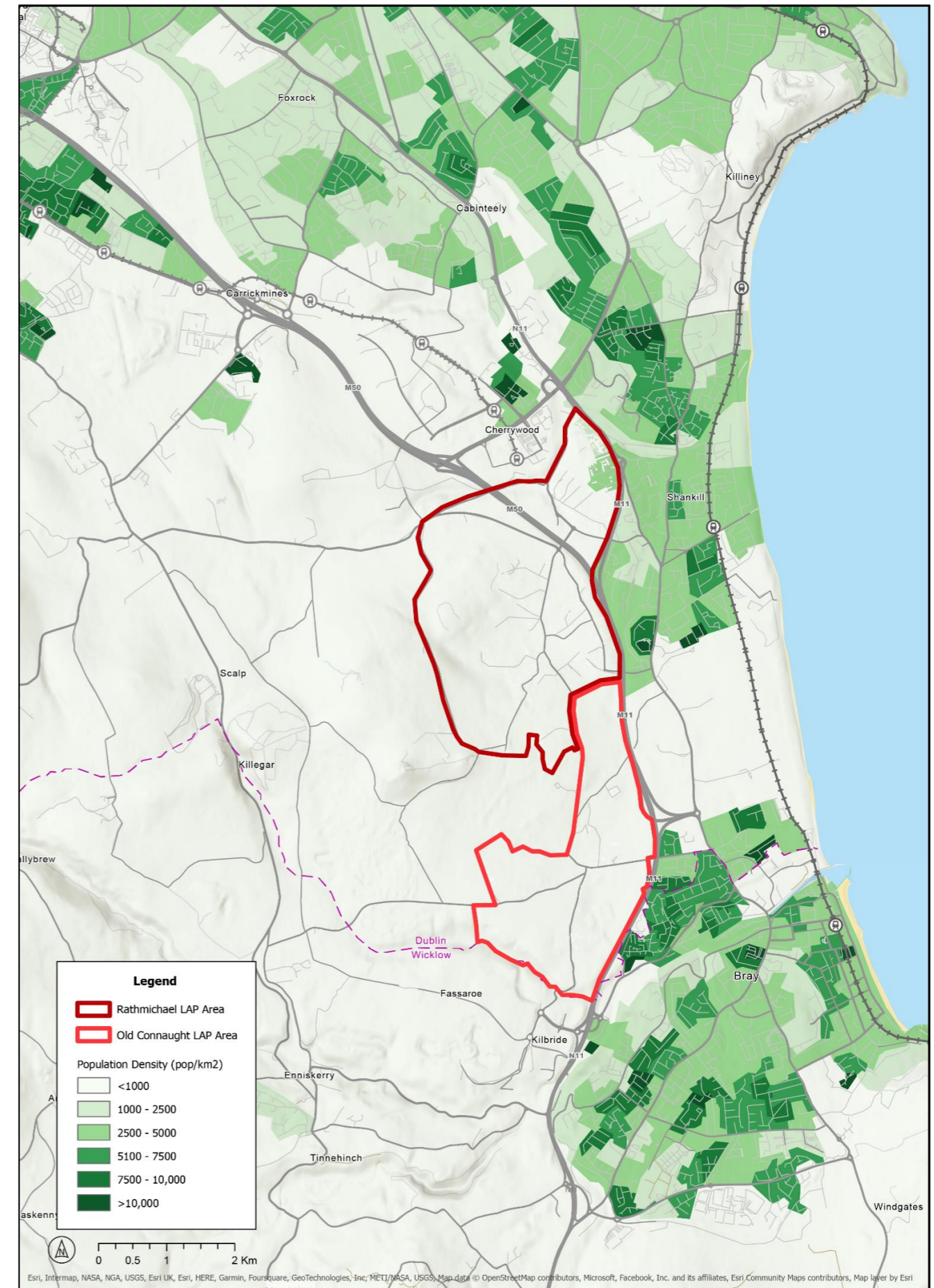


Figure 3-5 Population Density in the two LAP areas (Census 2016)

3.1.6 Employment density

The employment density has been derived from Census 2016 POWSCAR data. The POWSCAR data was used to identify the total number of destination work trips for each of the Census Workplace Zones within the two LAP areas.

Note that the 2022 Census data is due to be published for POWSCAR on 19th October 2023 which will provide a more up-to-date baseline scenario for the two LAP areas.

General Rules for Workplace zone creation

- Where possible, all zones to have a range of between 100 to 400 workers
- Each workplace zone contains a minimum of three workplaces
- Workplace zones nest within county boundaries; and
- No more than 90% of employees in any one workplace zone can work in one organisation

The number of total workers in each workplace zone was used to determine the key employment locations. The areas with the highest density of jobs in close proximity to the two LAP areas, Figure 3-6 are:

- Bray Main Street
- Carrickmines
- Cherrywood; and
- Sandyford

The analysis of employment density shows that the two LAP areas have limited internal employment areas; however, both are nearby or adjacent to relatively large employment areas, such as Bray, Carrickmines and a future potential at Fassaroe. The high employment areas of Cherrywood are located directly adjacent to the Rathmichael LAP area, with the level of employment within Cherrywood set to increase significantly upon completion of the SDZ Planning Scheme.

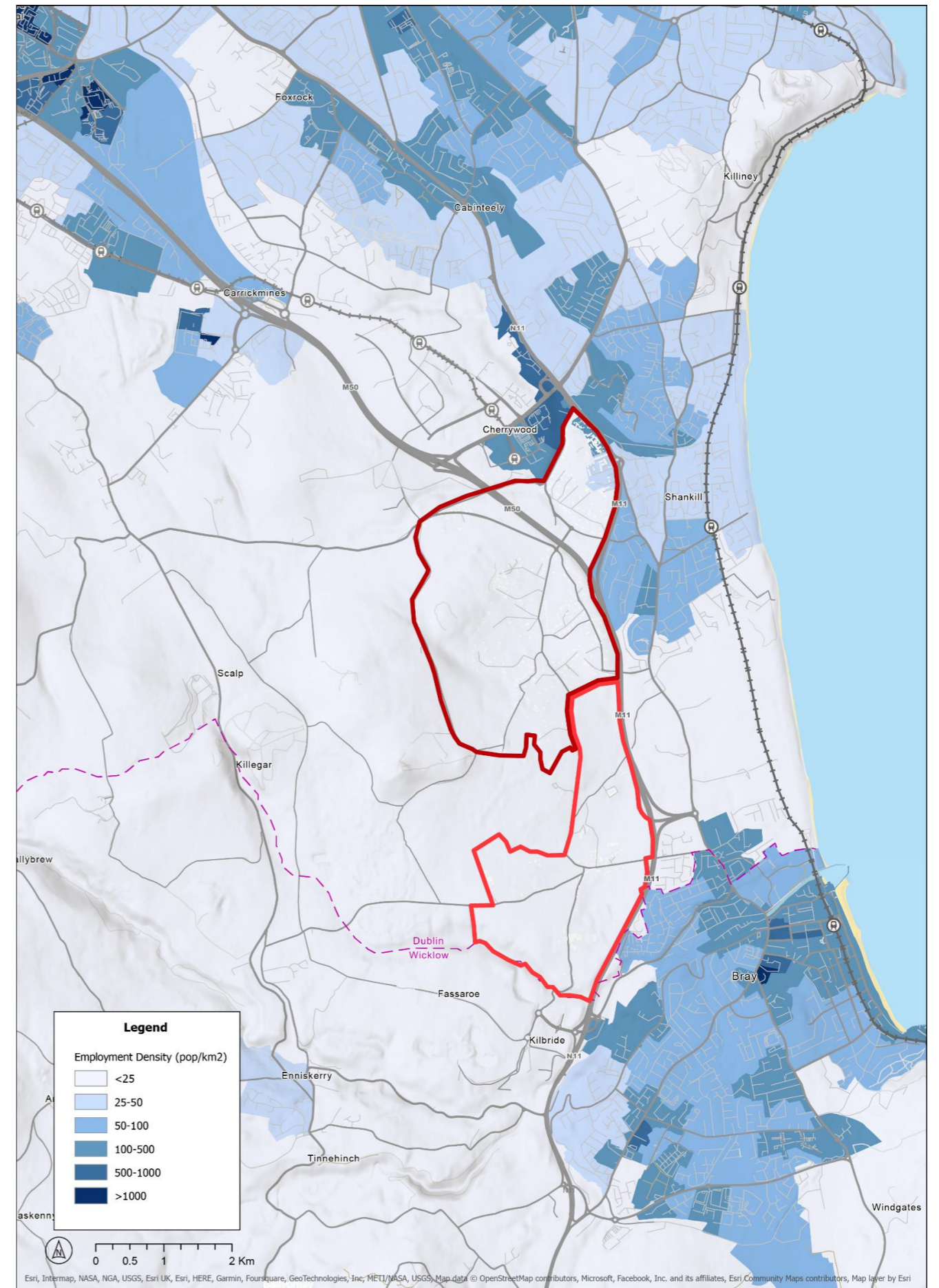


Figure 3-6 Employment Density (Census 2016)

3.1.7 Pobal HP Deprivation Index

The Pobal HP Deprivation Index data is available from the Trutz Haase website. This is the primary dataset on social deprivation in Ireland and is a key indicator for all local authorities. Based on earlier deprivation indices for Ireland, as well as analyses from other countries, three dimensions of affluence/disadvantage are identified: Demographic Profile, Social Class Composition and Labour Market Situation.

The Deprivation Index at SA level was mapped for the two LAP areas and surroundings as shown in Figure 3-7. From this, all areas within the two LAP areas are classed as either ‘Marginally above average’ or ‘Affluent’, with the majority of Old Connaught classed as ‘Marginally Above Average’ and the majority of Rathmichael classed as ‘Affluent’. The surrounding areas comprise of a mix of classifications ranging from ‘Very Disadvantaged’ to ‘Very Affluent’.

3.1.8 Land Use and Spatial Planning - Constraints and Opportunities

3.1.8.1 Constraints

- Existing lands are developed at low density in a largely unplanned manner and does not support compact growth
- Limited current employment opportunities within the LAP areas requiring most residents to travel longer distances to places of employment

3.1.8.2 Opportunities

- The LAP area is in close proximity to high employment zones in Bray and Cherrywood
- Existing social infrastructure and facilities in immediate area

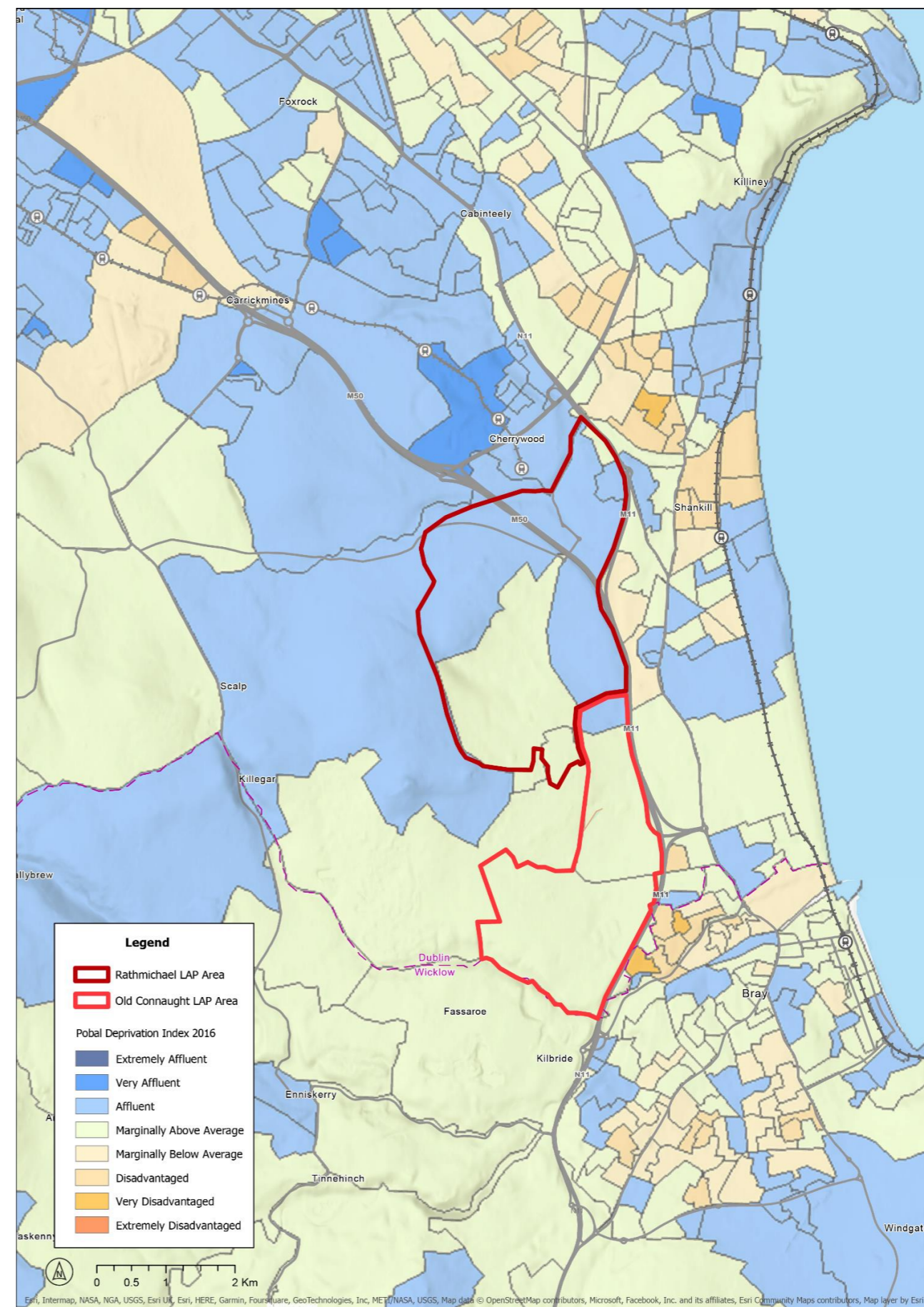


Figure 3-7 Pobal HP Deprivation Index Small Areas level

3.2 DLR Housing Sites

The need for the ICAS to provide guidance on the phasing of development in the two LAP areas in tandem with essential infrastructure, including the phasing of specific infrastructure projects where practicable is noted, as well as the need to identify opportunities to activate the five DLR social and affordable housing sites at an early stage, in the first phase of development, if appropriate. It is anticipated that the ICAS will identify what infrastructure is required to enable development of the DLR sites located in the two LAP areas.

The following processes may be availed of to deliver development on the DLR housing sites; however, it should be noted the process will be dependent upon the nature, location and scale of the proposed development:

- S.175 of the Planning and Development Act, 2000, as amended in respect of development if an Environmental Impact Assessment is required
- S.177AE of the Planning and Development Act, 2000, as amended in respect of development if an Appropriate Assessment is required
- Part 8 of Planning and Development Regulations 2001 as amended and the procedure is set out in Part 11, Section 179 of the Planning and Development Act 2000 as amended in respect of development by Local Authorities
- S. 179A of the Planning and Development Regulations 2023, if the site:
 - Is already be zoned for residential
 - Does not contravene a development or local area plan
 - Does not require an EIAR and AA
 - Can be connected to services
 - Will commence development prior to 31 December 2024
- In addition to identifying what infrastructure and phasing of development is required to unlock development, it will also be necessary to be cognisant of National, Regional and Local policies and objectives to ensure compliance with same. An outline of applicable guidance at a National, Regional and Local level have been provided in this report. In addition, Section 28(1) of the Planning and Development Act 2000 (as amended) allows for issuing of Guidelines to planning authorities regarding their functions under the Act and specifies planning authorities shall have regard to those Guidelines in the performance of their functions. Due regard will be required to the guidance and standards contained in the following Section 28 Guidelines, including, but not limited to:
 - Draft Sustainable and Compact Settlement Guidelines (This document suggests densities of 35-80 dph in suburban and edge areas of Metropolitan Towns, which includes Bray)
 - Sustainable Urban Housing Design Standards for New Apartments Guidelines for Planning Authorities (2022) (In accordance with this guidance, DLR as a County is classified as a suburban or intermediate location as per section 12.3.5 of the Development Plan)
 - Urban Development and Building Height Guidelines for Planning Authorities (2018)
 - Design Manual for Urban Roads and Streets (2019)
 - Retail Planning Guidelines (2012)
 - Housing Supply Target Methodology for Development Planning, (2020)
 - The Planning System and Flood Risk Management - Guidelines for Planning Authorities (2009)

- Sustainable Residential Developments in Urban Areas-Guidelines for Planning Authorities (2009)
- The Provision of Schools and the Planning System - Code of Practice for Planning Authorities (2008)
- Development Management Guidelines (2007)
- Childcare Facilities Guidelines (2001) (specifically the provision of one child- care facility (equivalent to a minimum of 20 child places) for every 75 dwelling units)
- Guidelines for Local Authorities and An Bord Pleanála on Carrying Out Environmental Impact Assessments (2018)
- Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (2017)
- Spatial Planning and National Roads: Guidelines for Local Authorities (2013)
- Architectural Heritage Protection: Guidelines for Planning Authorities (2011)
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (2009)
- Tree Preservation Guidelines (1994)
- Telecommunications Antennae Support Structures: Guidelines for Planning Authorities (1996)
- Forthcoming Sustainable and Compact Settlement Guidelines

Furthermore, Section 28(1C) of the Act includes a provision that Guidelines made under Section 28(1) may contain specific planning policy requirements (SPPRs) with which planning authorities, regional assemblies and the Board shall, in the performance of their functions, comply. SPPRs are included in guidance documents such as the Urban Development and Building Height Guidelines, Apartment Guidelines.

Particular regard is needed to the requirements set out in the County Development Plan 2022-2028 on phasing, infrastructure, core strategy, green infrastructure, environmental constraints, social and community requirements. For Council own Part 8 or Part 10 schemes, the Planning Authority shall have regard to the needs of the social housing list of the Council when assessing housing mix requirements. DLR will be required to ensure consistently and compliance with any proposed development on these lands to avoid any material contravention of the Development Plan.

The DLR sites are illustrated in Figure 3-8, and listed below in chronological order of priority, and include:

- Old Connaught Avenue
- Ballyman; and
- Rathmichael North, Rathmichael South and Rathmichael Bridge

3.2.1 DLR Housing Sites - Constraints and Opportunities

3.2.1.1 Constraints

- Limited services and amenities in the LAP areas
- Location of the sites inhibits connectivity to the wider area in Shankill (for the sites in Rathmichael) and in Bray (for the sites in Old Connaught)
- Lack of access to sufficient public transport for travelling to employment – the Luas terminates at Cherrywood and the DART is over 1km away

3.2.1.2 Opportunities

- Development at these sites would be supported by the two LAPs, furthering the amount of affordable housing in the County
- Planned employment expansion in Cherrywood, Fassaroe, and Bray means there will be employment and services withing proximity to the DLR housing sites
- Planned public transport and active travel improvements including the Woodbrook DART Station, Luas to Bray, and BusConnects Bray-City Centre would improve access to services and employment from these sites

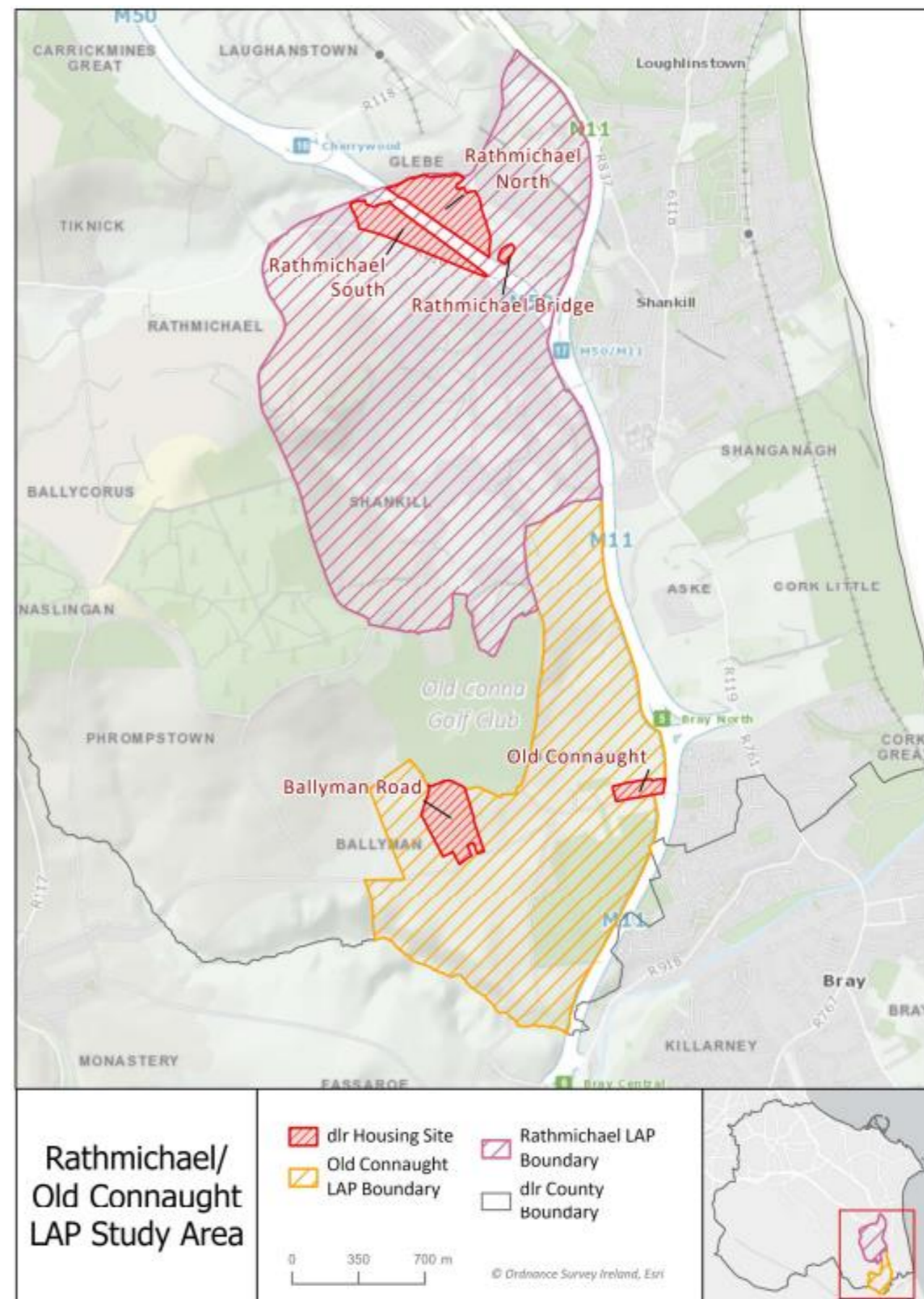


Figure 3-8 DLR Sites in Rathmichael and Old Connaught LAP two LAP areas (Source: DLR, 2023)

3.3 Environmental Considerations

3.3.1 Population and Human Health

Dún Laoghaire-Rathdown County has seen steady growth over the last two decades as shown from CSO Census data in Table 3-1. On completion, the development of the two LAP sites is likely to have a positive impact with regard to provision of more residential dwellings and residential amenities.

Table 3-1 Review of population growth in Dún Laoghaire-Rathdown (CSO).

Census Year	Population	% Growth Since Last Census
2022 ²	233,457	7%
2016 ³	218,018	5.7%
2011 ⁴	206,261	6.3%
2006 ⁵	194,038	n/a

3.3.2 Recreational Use and Amenities

Consideration should be given to the recreational use and amenities that benefit the local population within the two LAP areas which may be impacted upon by the construction of the proposed development.

In developing the two LAP areas the aim should be to ensure that the public amenity value of both areas are not diminished.

Table 3-2 Key amenities and recreational facilities

Feature	Sub-features
Amenities	Sports Pitches/Facilities
Recreation	Athletic track Network of Cycle Routes Playgrounds Public Amenities (general) Public Visitor Facilities Walks Places to Sit Woodlands

Residential dwelling and residential amenity relate to the human experience of one's home, derived from the general environment and atmosphere associated with the residence. The quality of the residential dwelling and amenity is influenced by a combination of factors, including site setting and local character, land-use activities in the area and the relative degree of peace and tranquillity experienced in the residence. The existing residential dwelling and amenity in the two LAP areas should be considered in terms of, for example, potential changes to land-use and visual amenity, traffic impacts, noise and dust nuisance as a result of the development of the LAP sites.

3.3.3 Archaeological, Architectural and Cultural Heritage

There are 42 recorded monuments such as earthworks, cross, castle, megalithic tomb etc., listed on the Sites and Monuments (SMR) within the two LAP areas, refer to Figure 3-9 below. There are 13 Record of Monuments and Places (RMP) such as House (16th/17th Century), Ringfort, Enclosure etc., identified within the two LAP areas.

Approximately 41 structures or group of structures such as house, farm house, wall garden, gate lodge etc., of architectural heritage significance have been identified within the boundary of the two LAP areas, refer to Figure 3-9. These are either listed within the Record of Protected Structures (RPS) as listed in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 or have been identified as part of the architectural survey carried out by the National Inventory of Architectural Heritage (NIAH).

According to Dún Laoghaire-Rathdown County Development Plan 2022-2028, there are no Architectural Conservation Areas (ACA) within the boundary of the two LAP areas.

There are five industrial heritage sites located in the two LAP areas. These are 654, 775, 777, 855, and 1018 as shown in Figure 3-10. All SMRs, RMPs and RPSs have statutory protection and avoidance of these features is recommended. Opportunities should be considered to incorporate archaeological or architectural heritage features appropriately into the development of the LAP sites. Chapter 11 of the Plan includes specific objectives and guidance relating to the protection of the County's heritage under the headings of archaeological heritage, architectural heritage and countywide heritage (which includes the DLR Heritage Plan), and important overarching themes which require specific, additional consideration.

A Historical Landscape Character Assessment (HCLA) of the Old Connaught and Rathmichael areas, prepared in 2008, offered an overall perspective of the existing landscape, its relationship with the extent and status of its historic fabric and buildings and how the promotion of sustainable development in that environment could be managed. The challenge is how to protect this built heritage whilst at the same time facilitating the appropriate development and economic growth of the Plan area. Balanced and considered policy guidance and objectives should be incorporated in the Draft LAPs to ensure (i) an appropriate degree of protection is afforded to the area's historic built environment, and (ii) how best new development can be integrated in the Plan area. New development will require to respect, and be cognizant of the local character and visual context of the historic core of Old Connaught and Rathmichael.

² [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.lgma.ie/en/publications/local-authority-sector-reports/census-2022-population-increase-by-local-authority-review-of-preliminary-data.pdf](https://www.lgma.ie/en/publications/local-authority-sector-reports/census-2022-population-increase-by-local-authority-review-of-preliminary-data.pdf)

³ [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.lgma.ie/en/publications/local-authority-sector-reports/census-2022-population-increase-by-local-authority-review-of-preliminary-data.pdf](https://www.lgma.ie/en/publications/local-authority-sector-reports/census-2022-population-increase-by-local-authority-review-of-preliminary-data.pdf)

⁴ https://www.cso.ie/en/media/csoie/census/documents/census2011vol1andprofile1/Census_2011_-_Population_Classified_by_Area.pdf

⁵ https://www.cso.ie/en/media/csoie/census/documents/census2006_Volume_1_-_Table_5.pdf

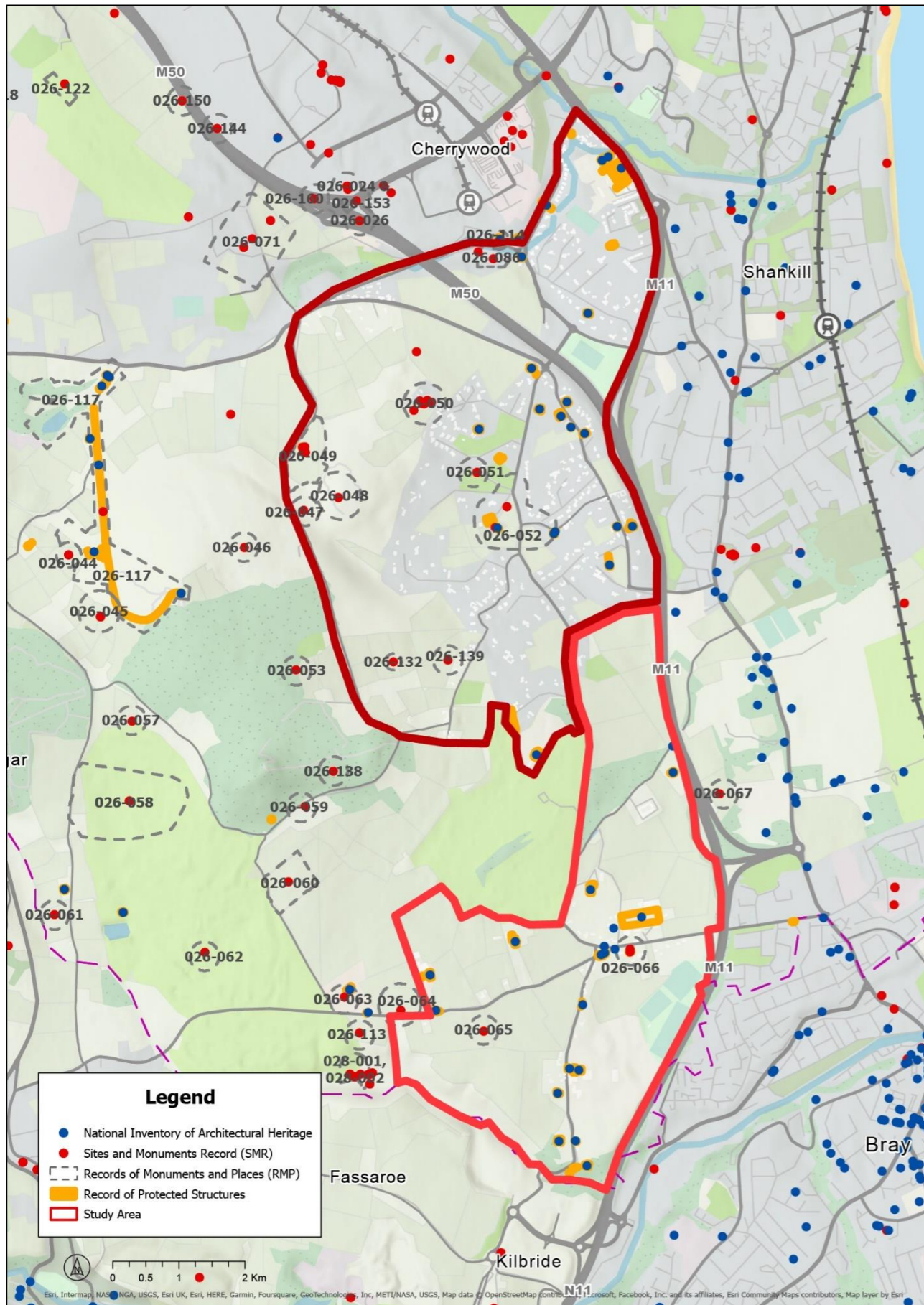


Figure 3-9 Archaeological, Architectural and Cultural Heritage sites.

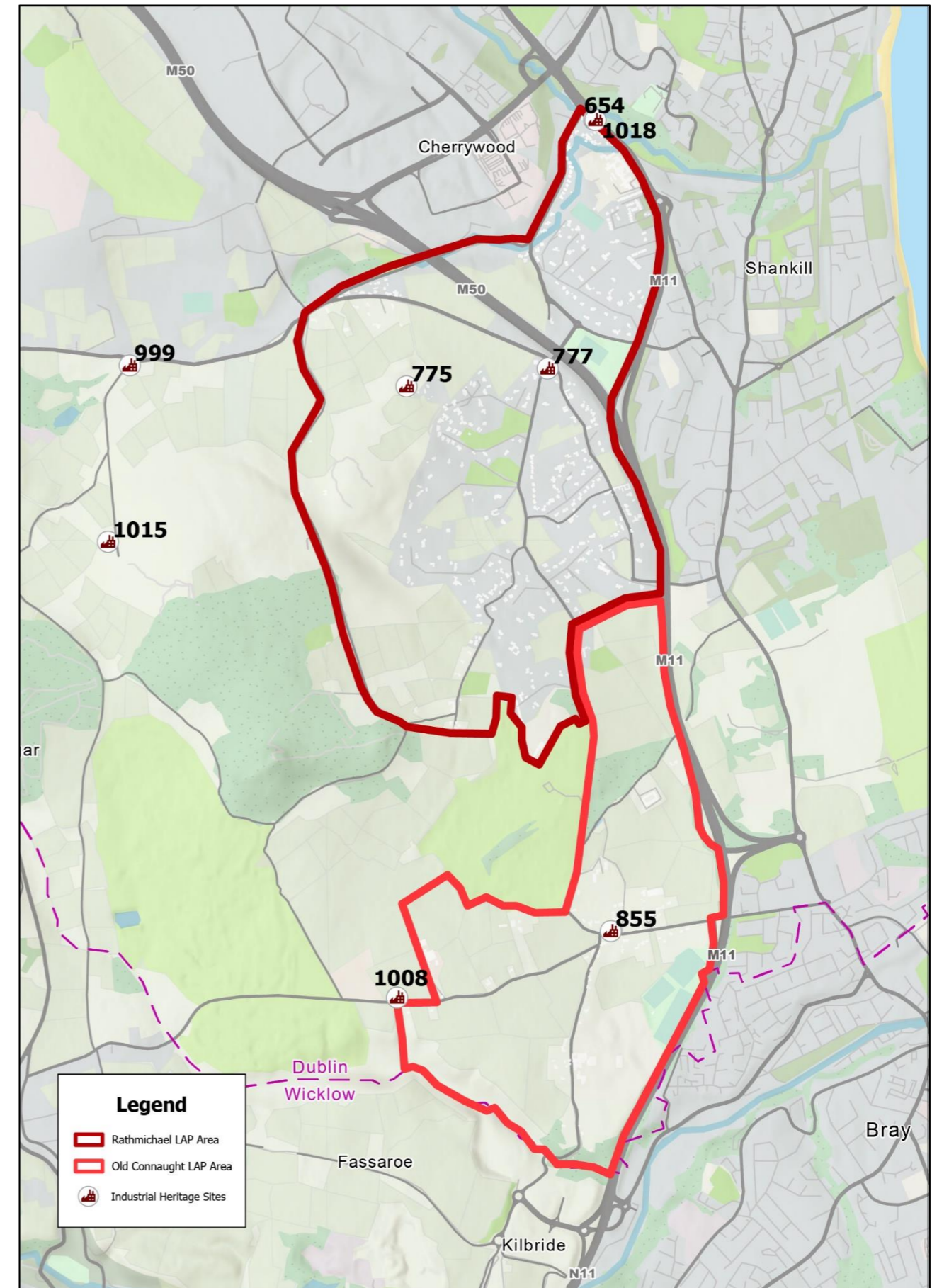


Figure 3-10 Industrial Heritage Sites

3.3.4 Biodiversity

Designated Sites

The Ballyman Glen SAC (Site code 000713), the Ballyman Glen pNHA (Site code 000713) and the Loughlinstown Wood pNHA (Site code 001211) are partially located adjoining the two LAP areas - refer to Figure 3-11.

The Ballyman Glen SAC is of particular relevance to the future development of the two LAP areas. Ballyman Glen – a Natura 2000 site - is the most important area of biodiversity in the Plan area and is located along the southwestern fringe of the Old Connaught LAP area. The Glen is a steep-sided valley, that traverses the County Brook stream, which defines the administrative boundary between, respectively, DLR and Wicklow County. The Glen is a candidate Special Area of Conservation and also a proposed Natural Heritage Area.

Loughlinstown Wood pNHA is located on the north bank of the Shanganagh River at Loughlinstown to the northeast of the Rathmichael LAP area. The wood was originally planted but following substantial regeneration, has produced woodland of natural character in age structure and form. This site is a good example of demesne-type mixed woodland and is now used chiefly for amenity purposes.

The following Natura 2000 sites and pNHAs are within 15km distance from the two LAP areas:

- The Knocksink Wood SAC/pNHA (Site code 000725)
- Powerscourt Woodland pNHA (Site code 001768)
- Dingle Glen pNHA (Site code 001207)
- Ballybetagh Bog pNHA (Site code 001202)
- Wicklow Mountains SAC (Site code 002122)
- Wicklow Mountains SPA (Site code 004040)
- Dargle River Valley pNHA (Site code 001754)
- Dalkey Coastal Zone and Killiney Hill pNHA (Site code 001206)
- Rockabill to Dalkey Island SAC (Site code 003000)
- Fitzsimon's Wood pNHA (Site code 001753)
- Dalkey Islands SPA (Site code 004172)
- Glencree Valley pNHA (Site code 001755)
- Bray Head SAC / pNHA (Site code 000714)
- Great Sugar Loaf pNHA (Site code 001769);
- South Dublin Bay and River Tolka Estuary SPA (Site code 004024)
- South Dublin Bay SAC/pNHA (Side code 000210)
- Powerscourt Waterfall pNHA (Site code 001767)
- Glen of the Downs SAC / pNHA (Site code 000719)
- The Murrough SPA / pNHA (Site code 004186)

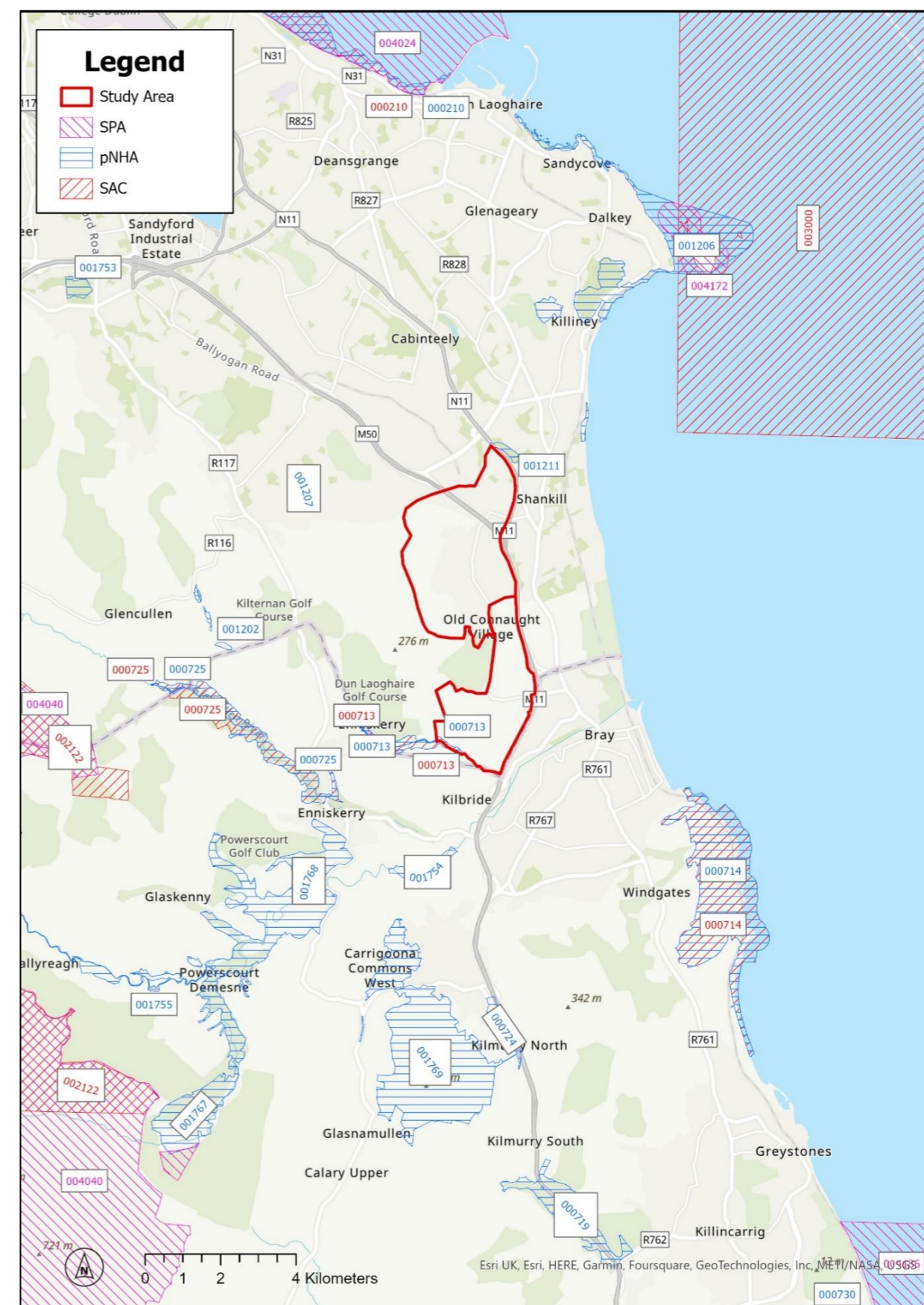


Figure 3-11 Location of Nearest European (Natura 2000) and Nationally Designated Ecological Sites to the two LAP areas (Source: NPWS)

There is a potential impact on the Ballyman Glen SAC/pNHA and the Loughlinstown Woods pNHA and these will need to be considered and assessed (and mitigated where necessary) at the appropriate stage of the development of the two LAP areas.

Habitats and Species There may be areas within the LAP areas that do not have formal protection under legislation, but which still possess a level of natural heritage importance. These areas may include woodlands, wetlands, semi-natural grasslands, hedgerows, trees, rivers, streams, private gardens, and other urban green spaces.

From the desktop review of aerial photographs and publicly available information, the two LAP areas consist of improved agricultural grasslands, open spaces/fields demarcated by hedgerows and various residential, commercial and recreation developments. There appears to be extensive hedgerows along the boundary fences of the open spaces/fields within the two LAP areas, which have the potential to have ecological value and provide ecological corridors. There are also areas of mature trees woodlands. The appropriate ecological assessments need to be undertaken during design development and prior to planning applications being submitted.

In order to aid this baseline assessment, GIS data from DLR pertaining to biodiversity was reviewed and mapped (Figure 3-12).

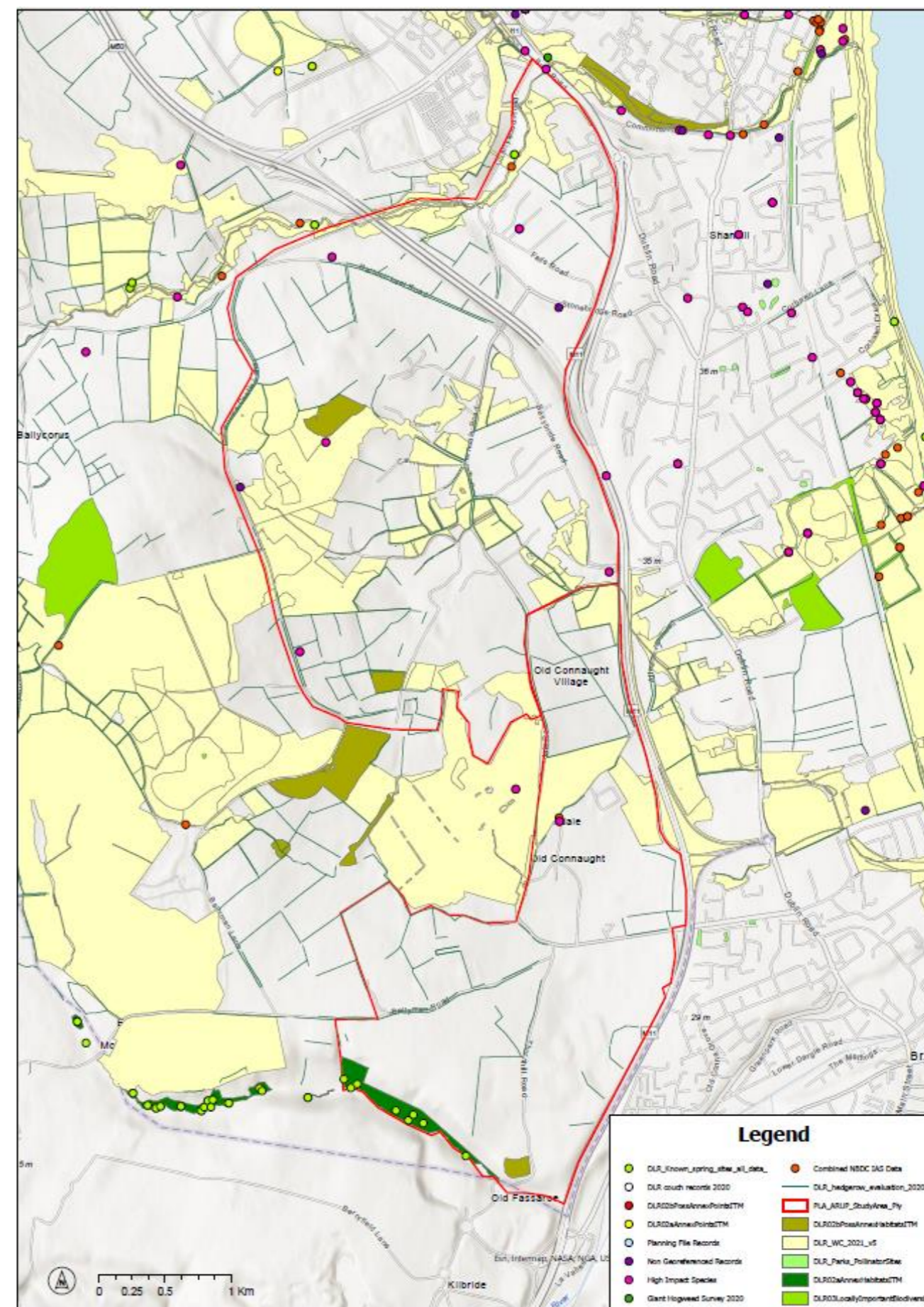


Figure 3-12 Biodiversity GIS Data

The National Biodiversity Data Centre website (www.biodiversity.ie) was reviewed as part of the desk-based assessment in order to ascertain the key Fossitt habitat types within the LAP areas. As illustrated in Figure 3-13, the key habitat types within the LAP areas include, but are not limited to: Mixed broadleaved woodland, mixed broadleaved/conifer woodland, riparian woodland, scrub, improved agricultural grassland, amenity grassland (improved), dry-humid acid grassland, dry siliceous heath, recolonising bare ground, tilled land and buildings and artificial surfaces.



Figure 3-13 Habitats in the LAP areas

There is one very small area of European dry heaths (4030), an Annex 1 habitat, within boundary the of the Rathmichael LAP area, at Puck’s Castle Lane (see Figure 3-14). Annex 1 habitats are habitats of European importance and protected under the Habitats Directive⁶. Dry heaths are generally associated with well-drained, nutrient poor, acidic soils and can host a large number of threatened species. A potential impact on the European dry heaths is therefore identified, and this habitat will need to be considered and assessed (and mitigated where necessary) at the appropriate stage of the development of the Rathmichael LAP.

⁶ Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora - OJ L 206 of 22.7.1992, p. 7



Figure 3-14 Annex 1 Habitat in the LAP areas

According to the DLR Hedgerow Review and Evaluation (Dún Laoghaire – Rathdown County Council, 2021)⁷, there are some hedgerows of County Value and Moderate Value within the LAP areas, as illustrated on Figure 3-15 below. The majority of hedgerows within the LAP areas however, have ‘no data’ assigned to them for clarification purposes, therefore the quality and importance of all hedgerows will need to be considered and assessed (and mitigated where necessary) at the appropriate stage of the development of the two LAP areas.

⁷ https://irishriverproject.com/wp-content/uploads/2022/02/2003do1-dlr_hedgerow_survey_final_2021-01-20.pdf

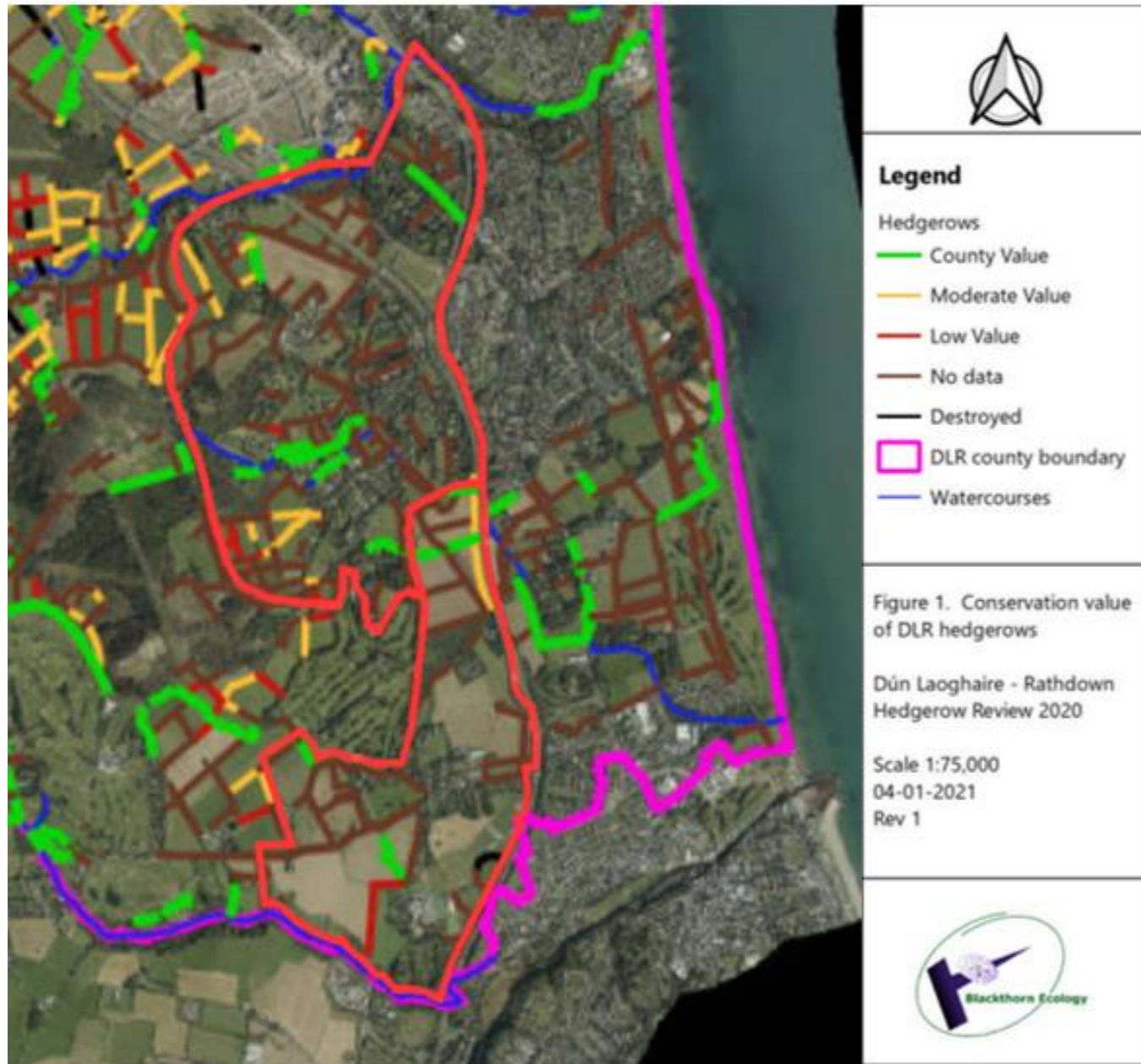


Figure 3-15 Hedgerow Survey Results within the LAP areas

Opportunities should be considered to avoid and minimise ecological impacts, including the loss of habitat. Regard should be had to the relevant policy objectives contained in Chapter 8 (Green Infrastructure and Biodiversity) of the DLRCC County Development Plan 2022-2028. Chapter 8 of the Plan includes policies for the protection, creation, and management of this resource in an integrated manner by focusing on key themes within GI such as: landscape and the coast; access; biodiversity; and parks. In addition, the integration of the emerging Ecosystem Services Approach (ESA), will be promoted and encouraged. ESA is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. This is also included in the Dún Laoghaire-Rathdown County Biodiversity Action Plan 2021-2025 (Dún Laoghaire-Rathdown County, 2021).

The river Dargle, is located in close proximity (~150metres) to the south-east boundary of the Old Connaught LAP area. The river Dargle is a protected river that is designated in the Salmonid Regulations (S.I. 293 / 1988). The Regulations give effect to Council Directive No. 78/659 on the quality of fresh waters needing protection or improvement in order to support fish life. They prescribe quality standards for salmonid waters (waters capable of supporting salmon, trout, char and whitefish) and designate the waters to which they apply, together with the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. Salmonid waters shall meet the quality standards specified in the Second Schedule on the basis of and subject to the conditions so specified.

A potential indirect impact on the river Dargle is therefore identified, and the water quality of this river will need to be considered and assessed (and mitigated where necessary) at the appropriate stage of the development of the Old Connaught LAP.

3.3.5 Water Quality

Surface Water

The Shanganagh River (IE_EA_10S010600) flows northeast along the north boundary of the Rathmichael LAP. It drains into the Irish Sea at Killiney Bay. It has a River Waterbody WFD Status 2016-2021 of “Good”, and the River Waterbody Risk Status is “Not at Risk” (Figure 3-16).

The Crinken Stream (IE_EA_10D010300 and IE_EA_10D010250) passes through the two LAP areas and has a tributary which flows southeast of Old Connaught LAP boundary. Both drain into the Irish Sea. Both have a River Waterbody WFD Status 2016-2021 of “Good”, and the River Waterbody Risk Status is “Not at Risk”.

The risk of potential impacts on the surface water quality which might be caused by the future development of the two LAP areas will need to be considered and assessed as appropriate during design development and prior to planning applications being submitted. Alternatives should be considered to avoid and minimise impacts on these waterbodies and to incorporate them into the proposed development.

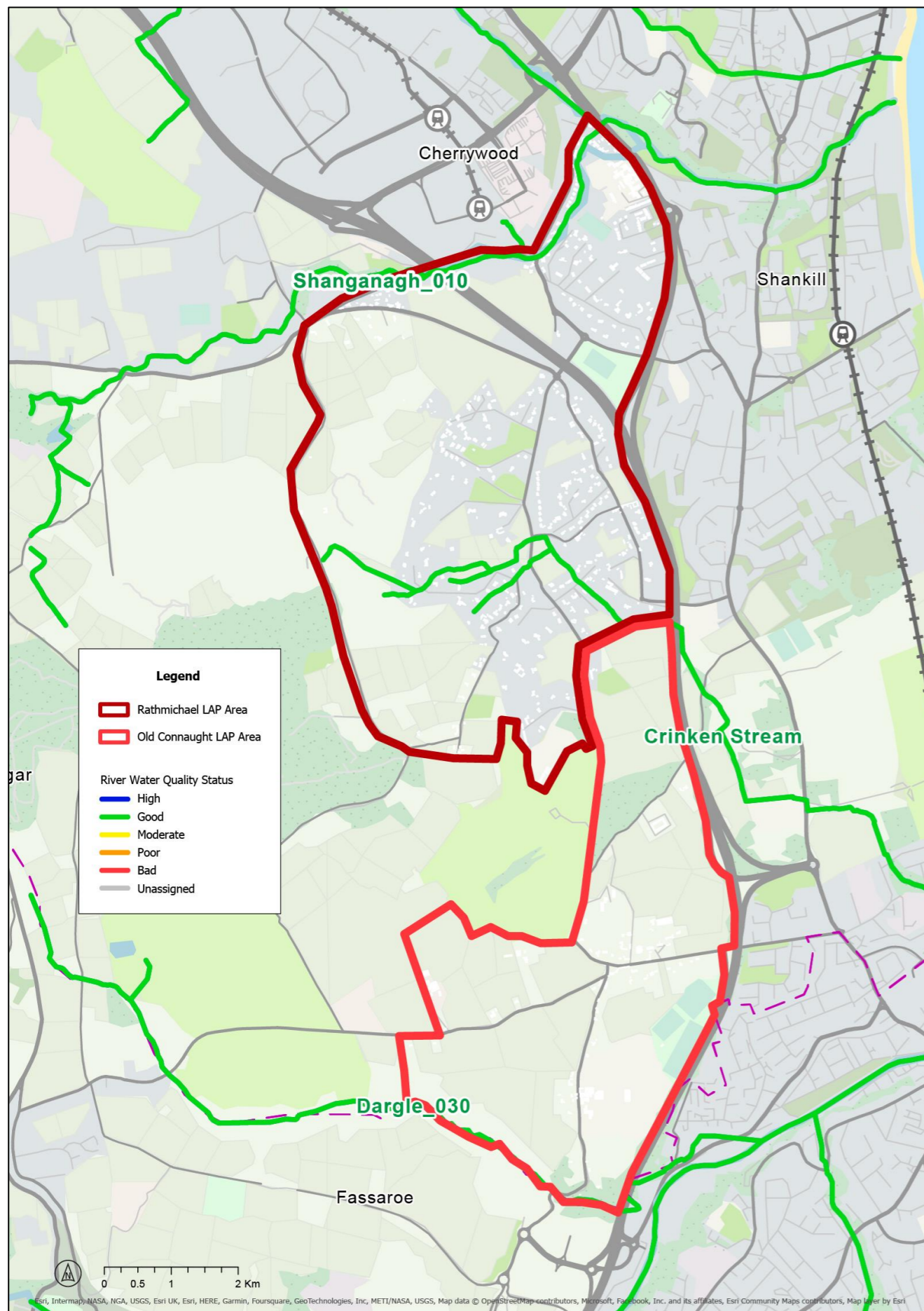


Figure 3-16 Surface Waterbody WFD Status (2016-2021) (Source: Environmental Protection Agency (EPA) Map Viewer)

Groundwater

The ground waterbody underlying the Old Connaught LAP is classed as ‘Good’ for both Wicklow and Enniskerry Gravels. However, ground waterbody WFD Risk Status for Wicklow is “At Risk” while for Enniskerry Gravel which is a smaller part of the two LAP areas to the south is “Not at Risk”, refer to Figure 3-17. The WFD definite “At Risk” waterbodies “had either not achieved their objectives by 2015 or had achieved their objectives but the trend data indicates that they are deteriorating, and that further action is required” (Source: WFD, 2018). The Rathmichael Groundwater Protection Study contains a policy in relation to the Crinken catchment and has deemed that certain parts of this area are not suitable for further development due to the cumulative effect of septic tanks on ground water. This will be superseded in the future when connection to public water mains is provided.

The risk of potential impacts on groundwater quality which might be caused by the future development of the two LAP areas will need to be considered and assessed as appropriate during design development and prior to planning applications being submitted. Pathways for effect on groundwater dependent habitats shall also be considered within this assessment stage.

There are three SACs with groundwater dependent habitats within 15km of the LAP boundaries. Those are: Wicklow Mountains SAC (002122), Knocksink Wood SAC (000725) and Ballyman Glen SAC (000713). The groundwater dependent habitats associated with these sites are outlined in Table 3-3.

Table 3-3 Groundwater Dependent Habitats within 15KM of the LAP Boundaries

Designated Site	Groundwater Dependent Habitats
Wicklow Mountains SAC (002122)	[3110] Oligotrophic Waters containing very few minerals [3160] Dystrophic Lakes [4010] Wet Heath [7130] Blanket Bog (Active)*
Knocksink Wood SAC (000725)	[7220] Petrifying springs with tufa formation (Cratoneurion) [91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)
Ballyman Glen SAC (000713).	[7220] Petrifying springs with tufa formation (Cratoneurion) [7230] Alkaline fens

The following groundwater dependant Annex 1 quality habitats, found outside of the SACs, are located within 15km of the LAP areas: Atlantic salt meadows, Blanket bogs, Bog woodland, Cladium fen, Alkaline fens, Dune slack, Hydrophilous tall herb fringe communities, Lagoons, Limestone pavement, Machair, Mediterranean salt meadows, Molinia meadows, Raised bog (Active), Residual alluvial forests, Transition mires, Turloughs and Wet heath.

Known spring sites that exist within the DLRCC boundary are noted within Figure 3-16 and correspond with the Ballyman Glen SAC for which the groundwater dependent habitat ‘Petrifying springs with tufa formation’ can be found. The potential for further springs should be considered and assessed at the appropriate stage of the development of the two LAP areas insofar as to accurately record and protect these features in future development.

There is a potential indirect impact on the groundwater dependant habitats within 15km of the LAP areas, and these will need to be considered and assessed (and mitigated where necessary) at the appropriate stage of the development of the two LAP areas.

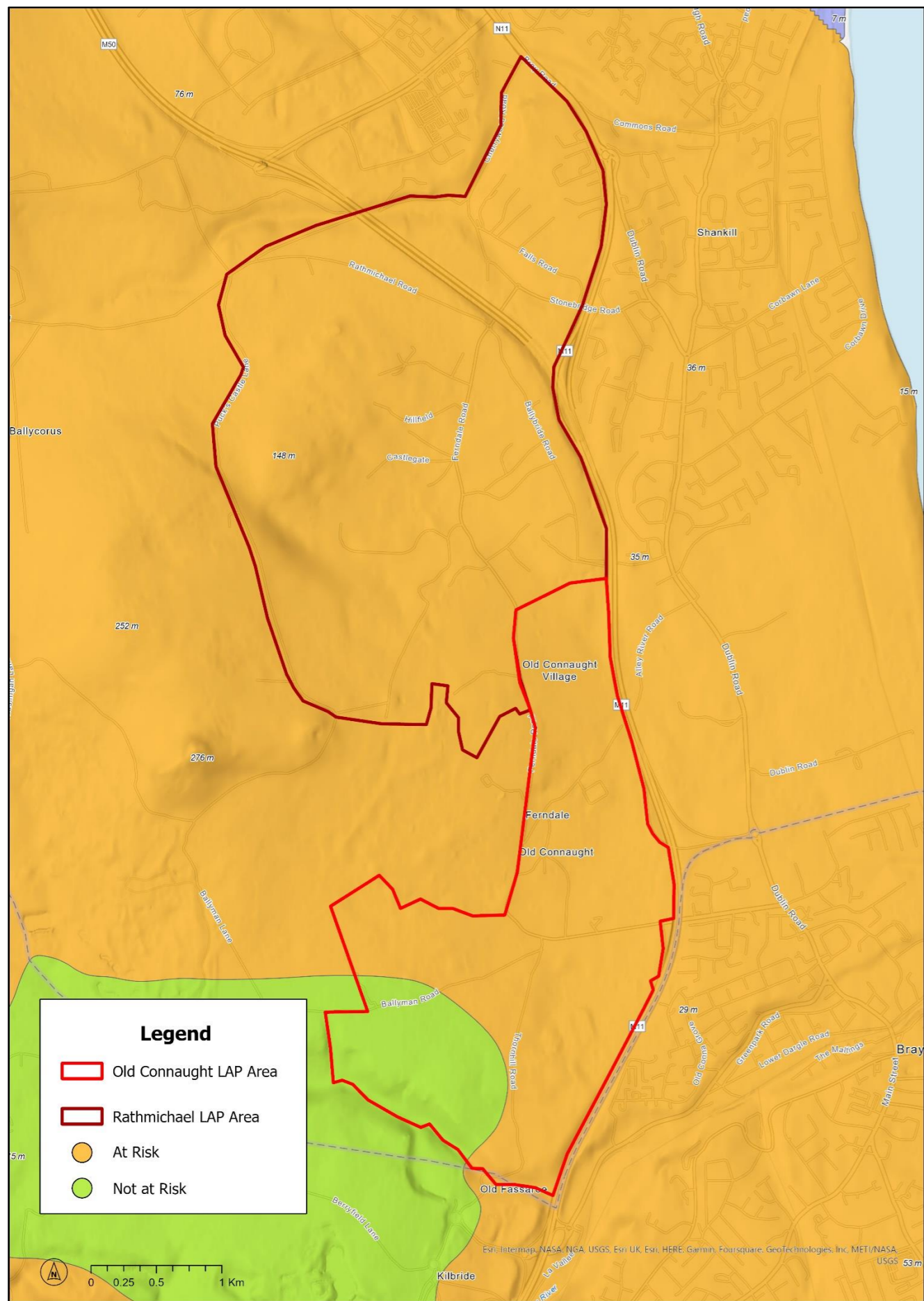


Figure 3-17 Ground Waterbody Approved Risk (Source: EPA 2020)

3.3.6 Air Quality

The two LAP areas are located within Zone A. Air quality for each zone are reported annually for the monitoring stations within each zone. Figure 3-18 shows the average annual concentration of each parameter recorded at the respective monitoring stations within Zone A for 2017-2021.

The publicly available ambient air quality data for Dublin area (Table 3-4), suggest that the air quality is within the EU air quality limits, except for NO_x which exceeded its Air Quality Standard for the protection of vegetation in 2019.

Table 3-4 Air Quality Monitoring 2017-2021 for Area A (Source: EPA)

Year	Annual Average NO ₂ (µg/m ³)	Annual Average PM10 (µg/m ³)	Annual Average PM2.5 (µg/m ³)	Annual Average NO _x (µg/m ³)
Limit	40 µg/m ³	40 µg/m ³	25 µg/m ³	30 µg/m ³
2017	20.8	12.4	7.5	37.6
2018	24.8	14.1	7.6	39.0
2019	27.1	14.5	9.2	60.0
2020	17.4	13.1	7.6	39.0
2021	20.4	12.7	7.7	39.2
Maximum	27.1	14.5	9.2	60

The potential air quality impacts which might be caused by the future development of the two LAP areas will need to be considered and assessed as appropriate during design development and prior to planning applications being submitted.

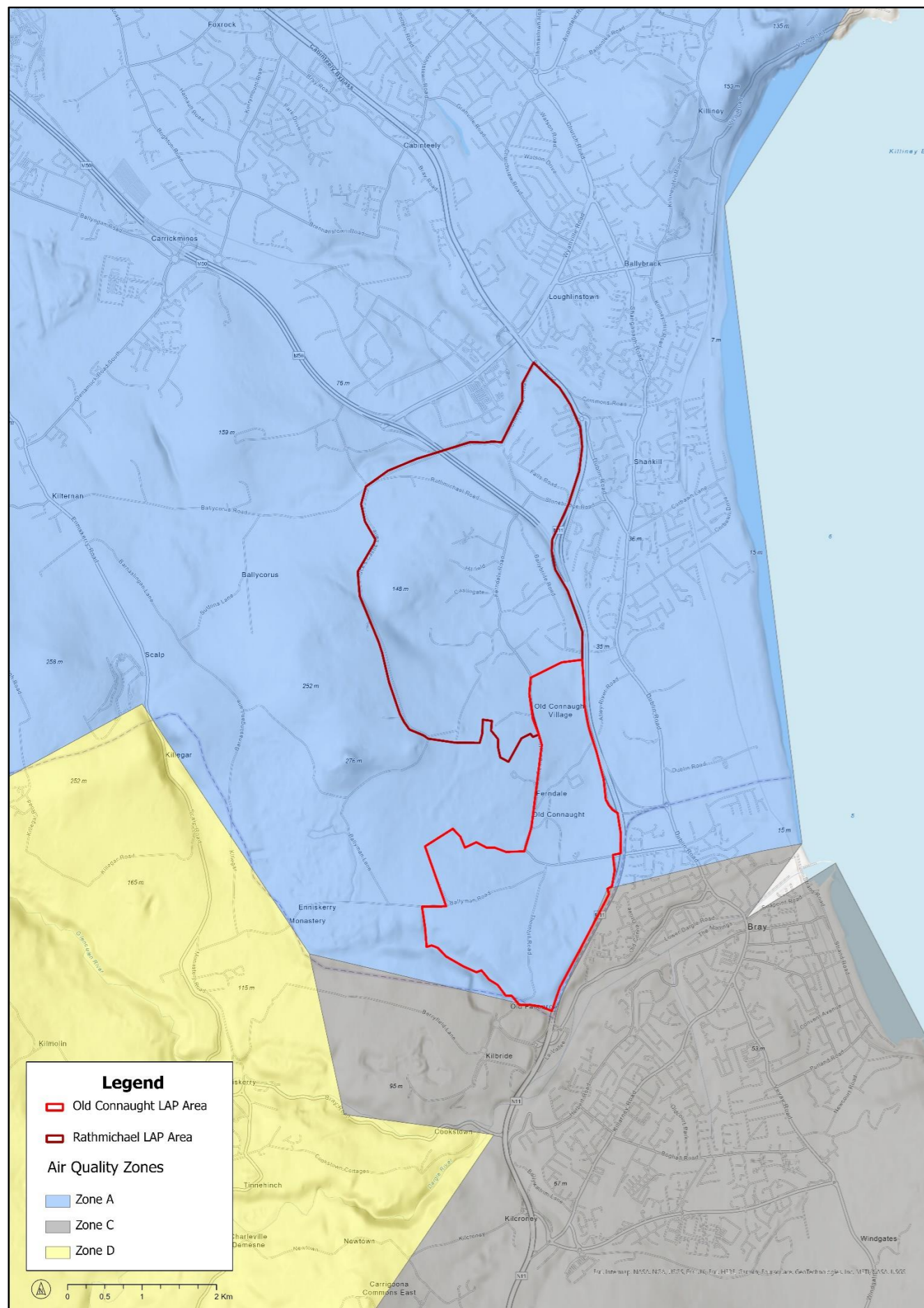


Figure 3-18 Air Quality Zones (Source: EPA)

3.3.7 Sound and Vibration

There are numerous noise sensitive receptors (e.g., residential dwellings, schools and medical facilities) within and surrounding the two LAP areas to the north, east, west and the south. The nearest environmental sensitive receptors identified are presented in Table 3-5.

Table 3-5 Nearest noise sensitive receptors

Direction	Sensitive Receptor and Distance from Site Boundary
North	Dwellings within boundary of the two LAP areas
South	15m (sparse residential dwellings).
East	55m (densely populated residential dwellings).
West	30m (sparse residential dwellings)

The M50 intersects the Rathmichael LAP area at the northern end while the M11 forms the eastern boundary of the two LAP areas. The M50 and the N11 may influence the local noise environment of the two LAP areas.

The potential for noise impacts which might be caused by the future development of the two LAP areas will need to be considered and assessed as appropriate during design development and prior to planning applications being submitted. In addition, the impact of existing noise sources (e.g., traffic noise from the M50/N11) on the development of the two LAP areas will also need to be considered and should inform the land use strategy brought forward as part of this Study.

3.3.8 Environmental Considerations - Constraints and Opportunities

3.3.8.1 Constraints

- Potential impacts on recreational use and public amenities that benefit the local population within the two LAP areas
- Potential impacts on recorded monuments identified within the two LAP areas.
- Potential impacts on structures or group of structures of architectural heritage significance with statutory protection have been identified within the boundary of the two LAP areas
- Potential impacts on the Ballyman Glen SAC (Site code 000713), the Ballyman Glen pNHA (Site code 000713) and the Loughlinstown Wood pNHA (Site code 001211)
- Potential for impacts on hedgerows, mature trees and woodlands in the two LAP areas as a result of proposed development
- The Rathmichael Groundwater Protection Study contains a policy in relation to the Crinken catchment and has deemed that certain parts of this area are not suitable for further development due to the cumulative effect of septic tanks on ground water.
- Potential indirect impacts on groundwater dependant habitats
- Potential indirect impacts on quality of water bodies in proximity, including the river Darel which is designated in the Salmonid Regulations.
- The potential air quality impacts which might be caused by the future development of the two LAP areas will need to be considered and assessed as appropriate
- Noise sensitive receptors are located within and surrounding the two LAP areas to the east and north and sparsely located to the south and west. Impacts on noise sensitives receptors (as a result of the development of the two LAP areas and the impact of existing noise sources (e.g., traffic noise from the M50/N11) should inform the land use strategy brought forward as part of this study

3.3.8.2 Opportunities

- Opportunities to incorporate archaeological or architectural heritage features appropriately into the proposed development. Regard should be had to the relevant policy objectives contained in Chapter 11 (Heritage and Conservation) of the DLRCC County Development Plan 2022-2028. Chapter 11 of the Plan includes specific objectives and guidance relating to the protection of the County's heritage under the headings of archaeological heritage, architectural heritage and countywide heritage (which includes the DLR Heritage Plan), and important overarching themes which require specific, additional consideration
- Opportunities to ensure Biodiversity gains and enhancements are incorporated into the LAPs
- Opportunities to ensure the LAPs incorporate (i) an appropriate degree of protection is afforded to the area's historic built environment, and (ii) how best new development can be integrated in the Plan area. New development will require to respect, and be cognizant of the local character and visual context of the historic core of Old Connaught and Rathmichael.
- Opportunities to implement the policy objectives contained in Chapter 8 (Green Infrastructure and Biodiversity) of the DLRCC County Development Plan 2022-2028 to avoid and minimise ecological impacts, including the loss of habitat. Chapter 8 of the Plan includes policies for the protection, creation, and management of this resource in an integrated manner by focusing on key themes within GI such as: landscape and the coast; access; biodiversity; and parks. In addition, the integration of the emerging Ecosystem Services Approach (ESA), will be promoted and encouraged. ESA is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. This is also included in the Dún Laoghaire-Rathdown County Biodiversity Action Plan 2021-2025 (Dún Laoghaire-Rathdown County, 2021).
- Opportunities to incorporate the Inland Fisheries Ireland guidance: Planning for watercourses in the Urban Environment into the LAPs and to incorporate them into the future developments, to ensure impacts on waterbodies within the two LAP areas are avoided and minimised.

3.4 Parks & Open Spaces, Heritage & Conservation, Green Infrastructure and Biodiversity and Landscape

3.4.1 Parks, Open Space, Heritage & Conservation

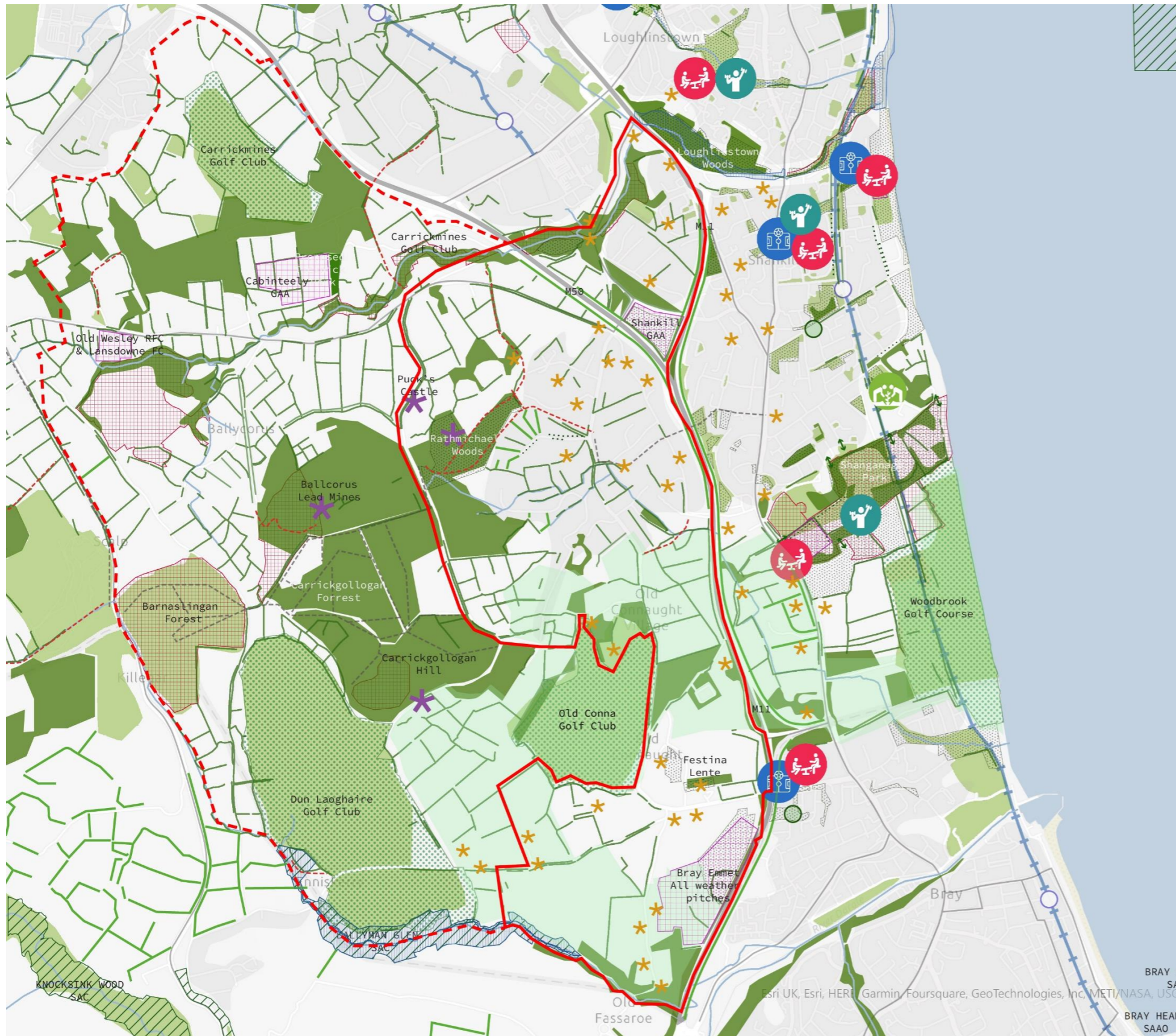
The existing open amenity space in the two LAP areas is presented in Figure 3-18 overleaf.

Within the proximity of the two LAP areas, there are existing regional and district parks including Shanganagh Park to the east and Ticknick Park to the north which offer several facilities for the local population. Shanganagh Park provides playgrounds, outdoor gym as well as allotments and it is an important site within both green infrastructure as well as ecological connectivity context. Access to the facilities offered within the Shanganagh Park is limited as it requires traversing the M11. To the west, as the landscape becomes more rural, access to nature and associated activities, both passive and active, become attainable. Most notably Rathmichael Woods, Carrickgollogan Hill and Forest, Barnaslingan Forest, Dún Laoghaire Golf Club, and Ballycorus Flue Chimney acting as a cultural heritage focal point for the surrounding area.

Within the proximity of the Old Connaught LAP area, zoning objective F lands include elements of cultural heritage such as the Walled Garden and Old Connaught House and its associated lands, now converted into residential apartments. Numerous protected structures, captured in the National Inventory of Architectural Heritage (NIAH) are dotted throughout the Old Connaught LAP area. The structures and their associated curtilages add to the overall sense of place, history and landscape character. Rathmichael Church and Graveyard, the five-arch viaduct, Jubilee Hall on Ballyman Road contribute to the area's cultural heritage and landscape character. More information about heritage and cultural sites can be found in Section 3.3.3.

As detailed in Section 3.3.3 Archaeological, Architectural and Cultural Heritage, within the Rathmichael LAP area, public open spaces are limited with Rathmichael Wood acting as one of the main areas of interest with cultural heritage elements providing attraction and a sense of place. Elsewhere in Rathmichael, zoned F lands include 'specific use' open space areas such as Shankill GAA/FC (sandwiched between M11/ M50) and SVS FC pitches, which are located behind St Columcille's Hospital. Zoned F /specific use open spaces within Old Connaught include Old Conna Golf Club, Bray Emmets GAA club which adjoins St Gerard's Secondary school, its associated grounds and playing pitches. The elevated lands in St Gerard's and the reduced density of mature trees and hedgerow allow for broad views of the coastline and glimpses of Bray Head SAC.

Other open spaces include those associated with residential housing estates such as Rathmichael Manor and Parc Na Silla.



LEGEND

- Red Line Boundary
- Water
- Water Streams
- Urban Fabric
- Road Infrastructure
- Railway
- Train stops
- Existing Hedgerows - as per Dun Laoghaire - Rathdown Hedgerow Review 2020
- Existing hedgerows - indicative locations
- Existing tree row - indicative locations
- Green Spaces
- Vegetated Areas - indicative
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Proposed Natural Heritage Area (pNHA)
- Locally Important Biodiversity Sites
- Golf Courses
- Sports Grounds
- Playgrounds
- Outdoor Gym
- Allotments
- MUGA'S
- ✳ National Inventory of Architectural Heritage - Cultural Heritage Monuments
- ★ National Inventory of Architectural Heritage - Protected Structures
- ↔ Entrances to Parks/Open Spaces
- Recreational Access Routes
- Public Right of Way
- DLRC Development Plan - Objective GB
- Old Connaught Draft Local Area Plan - Objective F - To preserve and provide for open space with ancillary active recreational amenities.

Figure 3-19 Parks, Open Space, Heritage & Conservation

3.4.2 Green Infrastructure and Biodiversity

As defined in DLRCOCO Development Plan 2022-2028, Green Infrastructure (GI) can be broadly defined as a strategically planned network of high quality natural and semi-natural areas with other environmental features, which is designed and managed to deliver a wide range of ecosystem services and protect biodiversity in both rural and urban settings.

The existing green infrastructure and biodiversity in the two LAP areas are presented in Figure 3-16 overleaf. The diagram includes important existing and proposed regional and district parks as well as green corridors as identified within the DLRCOCO Green Infrastructure Strategy.

As identified within the DLR County Biodiversity Action Plan 2021-2025, the two LAP areas sit within the Shanganagh to Marlay Park green corridor including Rathmichael Wood and the Proposed Ticknick Park. The two LAP areas also lay within the Glendoo Mountain and Shanganagh wildlife corridor. The Brides Glen corridor to the north of the two LAP areas forms a connection with The Fernhill to Brides Glen corridor further northwest. To the south, Ballyman Glen, a Special Area of Conservation (SAC), assists in defining a natural administrative boundary.

As mentioned above, located consistently through-out the two LAP areas are the presence of DLRCOCO Development Plan 2022-2028 Policy Objective OSR7: Trees, Woodland and Forestry - It is a Policy Objective to implement the objectives and policies of the Tree Policy and the forthcoming Tree Strategy for the County, to ensure that the tree cover in the County is managed, and developed to optimise the environmental, climatic and educational benefits, which derive from an 'urban forest', and include a holistic 'urban forestry' approach. This objective related to the protection and preservation of trees, many of which form substantial clusters of woodland and reinforce hedgerow boundaries and their associated ecological corridors.

Opportunities should be considered to avoid and minimise ecological impacts, including the loss of habitat. For example, where practicable hedgerows should be retained. Regard should be had to the relevant policy objectives contained in Chapter 8 (Green Infrastructure and Biodiversity) of the DLRCOCO County Development Plan 2022-2028. Chapter 8 of the Plan includes policies for the protection, creation, and management of this resource in an integrated manner by focusing on key themes within GI such as: landscape and the coast; access; biodiversity; and parks. In addition, the integration of the emerging Ecosystem Services Approach (ESA), will be promoted and encouraged. ESA is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. This is also included in the Dún Laoghaire-Rathdown County Biodiversity Action Plan 2021-2025 (Dún Laoghaire-Rathdown County, 2021). Summary of policies is available in the Appendix A.

Considering the detailed information available as part of the 2020 Hedgerow Review and the presence of the EU Annex habitats within the two LAP areas (detailed in Section 3.3.4 of this report), to support the ICAS, it would be potentially critical to capture a detailed tree and hedgerow survey, particularly within private or restricted access areas. This will further inform our understanding of their existing ecological value and to fully understand the impacts of any potential development.

It should be noted that more information on biodiversity can be found in Section 3.3.4 – Biodiversity.

3.4.3 Landscape Appraisal

As detailed in the Landscape Character Assessment which forms the Appendix 7 of DLRCOCO County Development Plan 2022-2028, and as further outlined in the Appendix A of this Report, A.1.4 Local Policy, the landscape character of the two LAP areas is described as rural with dotted enclaves of low density residential units. The rural character is reinforced by the presence of existing hedgerows including priority hedgerows as identified in the Dun Laoghaire-Rathdown hedgerow survey.

The rolling nature of the area offers vistas to Carrickgollogan, the Sugarloaf and across to Bray Head. These views have been identified in the county development plan as protected views. Further south, connected by Ferndale Road, sandwiched between zoning objective GB lands, in the Old Connaught LAP area, the residential dwellings are predominantly concentrated around the village settlement of Old Connaught. The area maintains the theme of established hedgerows, mature trees defining edges, scenic views and rural sense of place.

In the Rathmichael LAP area, despite the presence of scattered pockets of low-density residential units, the area retains a rural ambiance due to the mostly intact hedgerows and mature trees which adorn many road edges and property boundaries.



- LEGEND**
- Red Line Boundary
 - Water
 - Water Streams
 - Urban Fabric
 - Road Infrastructure
 - Railway
 - Train stops
 - Existing Hedgerows - as per Dun Laoghaire - Rathdown Hedgerow Review 2020
 - Existing hedgerows - low value
 - Existing hedgerows - medium value
 - Existing hedgerows - county value
 - Existing hedgerows - indicative locations
 - Existing tree row - indicative locations
 - Green Spaces
 - Vegetated Areas - indicative
 - Special Area of Conservation (SAC)
 - Special Protection Area (SPA)
 - Proposed Natural Heritage Area (pNHA)
 - Locally Important Biodiversity Sites
 - Pollinator Sites
 - Tree Preservation Order (TPO)
 - * Invasive Alien Species
 - ↔ Protected Views
 - DLRCC Development Plan - Objective GB
 - DLRCC Biodiversity Action Plan - Brides Glen Corridor
 - DLRCC Biodiversity Action Plan - Glendoo Mountain to Shanganagh corridor
 - DLRCC Biodiversity Action Plan - Fernhill to Brides Glen
 - Green Corridors and regional and district parks as identified in DLRCC Green Infrastructure Strategy

Figure 3-20 Existing Green Infrastructure

3.4.4 Parks & Open Spaces, Heritage & Conservation, Green Infrastructure & Biodiversity - Constraints and Opportunities

This section highlights the constraints and opportunities for Parks & Open Spaces, Heritage & Conservation, Green Infrastructure & Biodiversity, and Landscape. The constraints and opportunities are also mapped in Figure 3-21 and Figure 3-22.

3.4.4.1 Constraints:

- Minimal access to public open spaces or council managed parks. No playgrounds (acting as destinations, providing amenity for a specific age types) located within the two LAP areas. Access to public open spaces with facilities to the east are bisected by major road infrastructure
- Private or restricted public access to open spaces (private golf clubs, school grounds)
- Potential impact on existing hedgerows, mature vegetation and habitat fragmentation
- Potential high visual impact of any development due to loss of established hedgerows/trees
- Number of protected views and areas of elevated topography.
- Existing residential land/property ownership and their associated boundaries and interfaces consist of established, mature vegetation
- Any proposed development of desired pedestrian, vehicular, active travel, road and/or general improved infrastructure works may have potential impacts on established habitats



Figure 3-21 Constraints mapping

3.4.4.2 Opportunities:

- Celebrate and reinforce the natural and cultural heritage values and landscape character of the area through well considered and integrated design.
- Develop a strategy for the strong built heritage of the county integrating within the Green Infrastructure Network as identified in the DLRCC Green Infrastructure Strategy.
- Provide for the provision of new, high quality public open spaces providing a range of both passive and active amenity
- Protect, preserve, restore and enhance ecological connectivity within the study areas and beyond. Restore and mitigate fragmentation of ecological corridors.
- Enhance the ecological corridor from Rathmichael Wood to Shanganagh Park.
- Protect the Ballyman Glen SAC), the Ballyman Glen pNHA and the Loughlinstown Wood pNHA
- Integrate biodiversity into potential pedestrian routes to enhance GI connectivity
- Capture, protect and frame key views to surrounding natural landmarks
- Use agricultural land to create multifunctional green connections to areas of interest providing connectivity, delivering SuDS, biodiversity refuges, and public open spaces
- Creation of constructed wetlands in flood risk areas to provide nature-based solutions, amenity and ecological diversity
- Opportunity to integrate suitable lighting to protect nocturnal habitats and species.

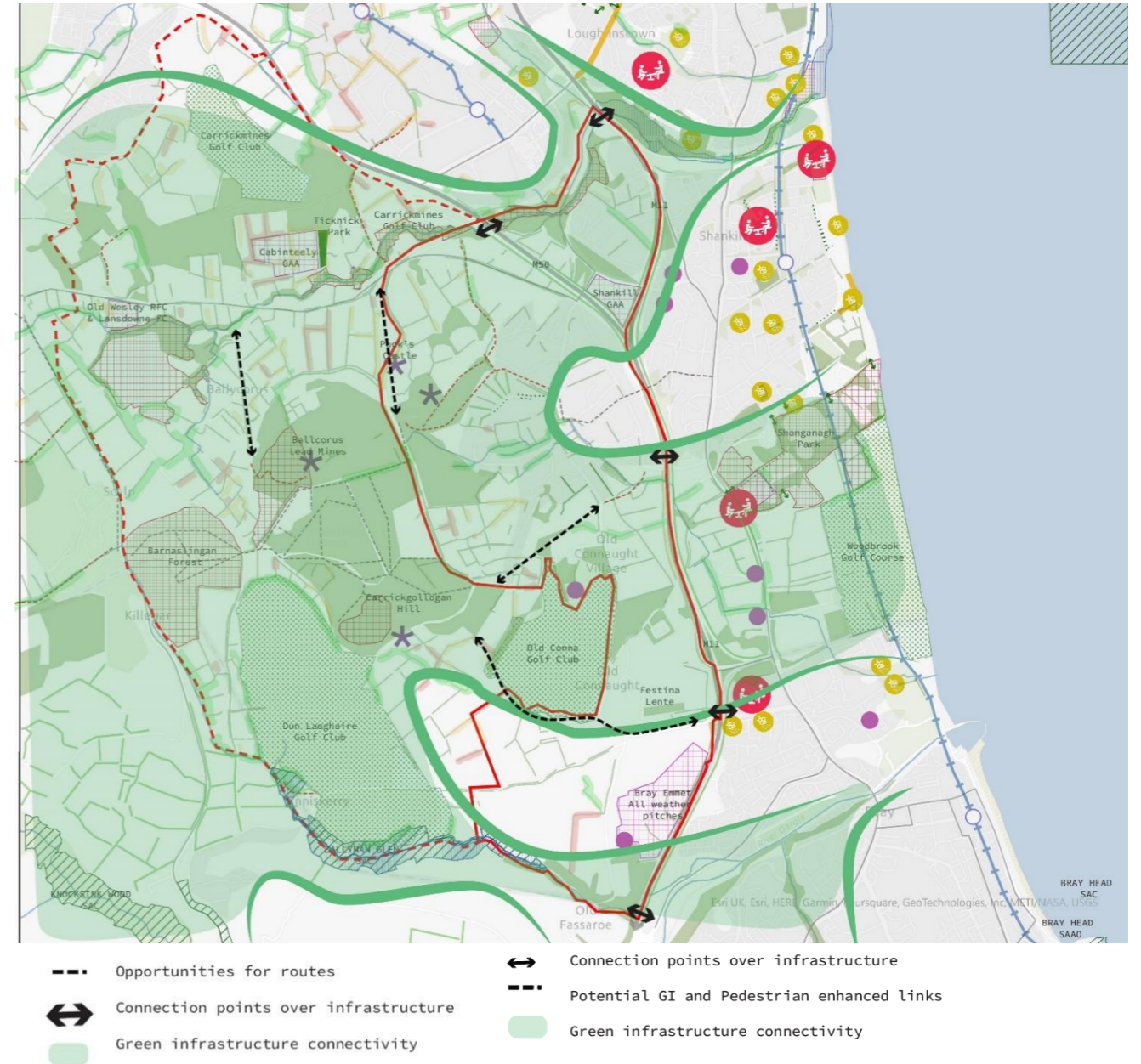


Figure 3-22 Opportunities mapping

3.5 Transport

3.5.1 Overview

This section of the baseline provides an overview of the existing transport network and services and presents some early findings related to constraints and opportunities which will be assessed as the Study progresses.

3.5.2 Walking

The current walking infrastructure in the two LAP areas is largely non-existent or of low quality. The majority of the roads within the two LAP areas have no provision of footpaths, and the M11/N11 and M50 act as barriers to pedestrian permeability to the east. The major physical constraints for pedestrians along with existing crossing routes are shown in Figure 3-23.

The walking catchment maps from primary and post primary schools and bus/rail stops are shown in Figure 3-24 to Figure 3-27. These maps show the limited pedestrian connectivity between the two LAP areas and existing education sites or transport corridors.

3.5.2.1 Constraints

- Lack of connecting footpaths within the two LAP areas due to rural nature of the current settlements
- Limited safe crossings at junctions within the two LAP areas
- Allies river is a barrier for permeability
- Hilly topography resulting in steep inclines and declines
- Lack of pedestrian connections to high-quality public transport corridors
- Limited, if any, viable walking connections to existing education sites; and
- M11/N11 and M50 act as barriers to permeability

3.5.2.2 Opportunities

- A largely ‘blank canvas’ in potential development areas offers the opportunity to prioritise active modes for residents
- Potential to re-establish pedestrian connection along Allies River Road across the M11, which is noted in the DLRCC Development Plan 2022 – 2028
- Potential to provide footpaths along key roads within the two LAP areas to encourage walking for short journeys, particularly with the potential introduction of increased non-residential uses to serve residents within the two LAP areas
- Opportunity to establish pedestrian connections to high quality public transport corridors such as Brides Glen Luas station
- Opportunity to improve established walking trails through the two LAP areas including the Dublin Mountains Way
- Support trips to school by foot (and bicycle) through both infrastructural and softer measures
- Opportunity to improve pedestrian safety for existing and future residents
- New links and connections would make walking an attractive option. Pedestrian paths could be provided through new development areas and green spaces and could connect through residential areas; and

- Take advantage of nearby development areas to improve permeability to Cherrywood in the north, Fassaroe in the south, and Woodbrook to the east (relating to SLO 150)

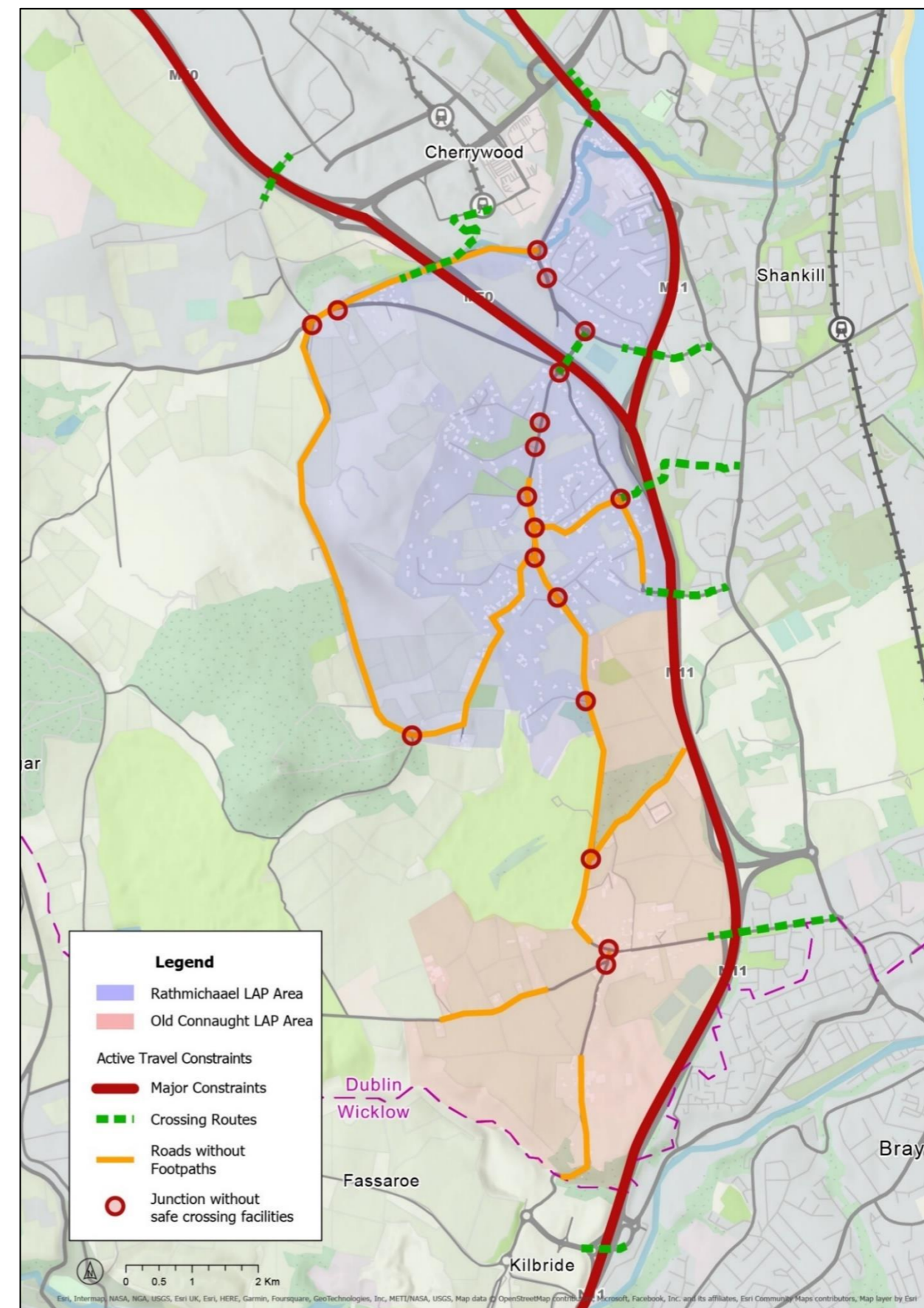


Figure 3-23 Active Travel Constraints

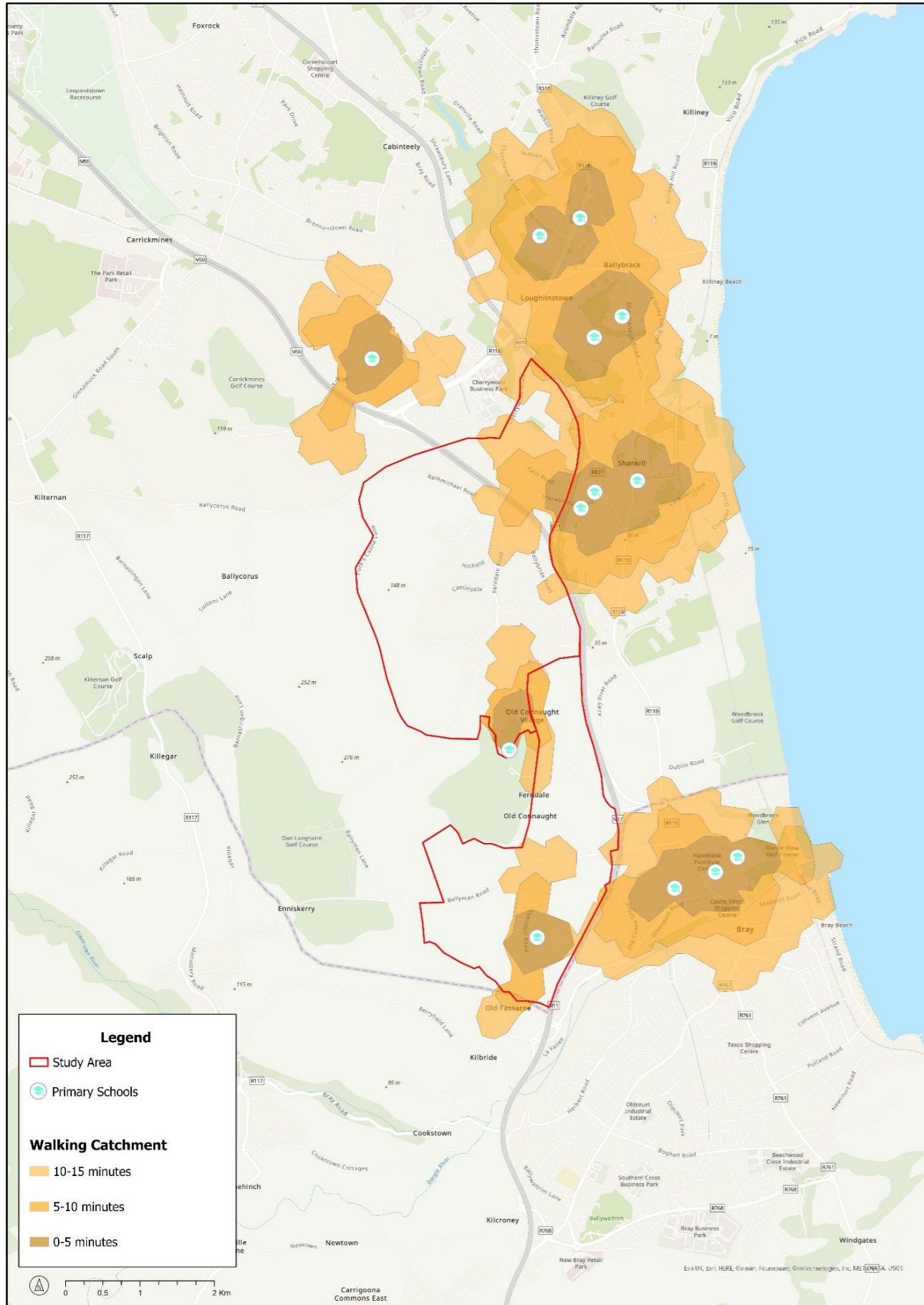


Figure 3-24 Primary School Walking Catchments

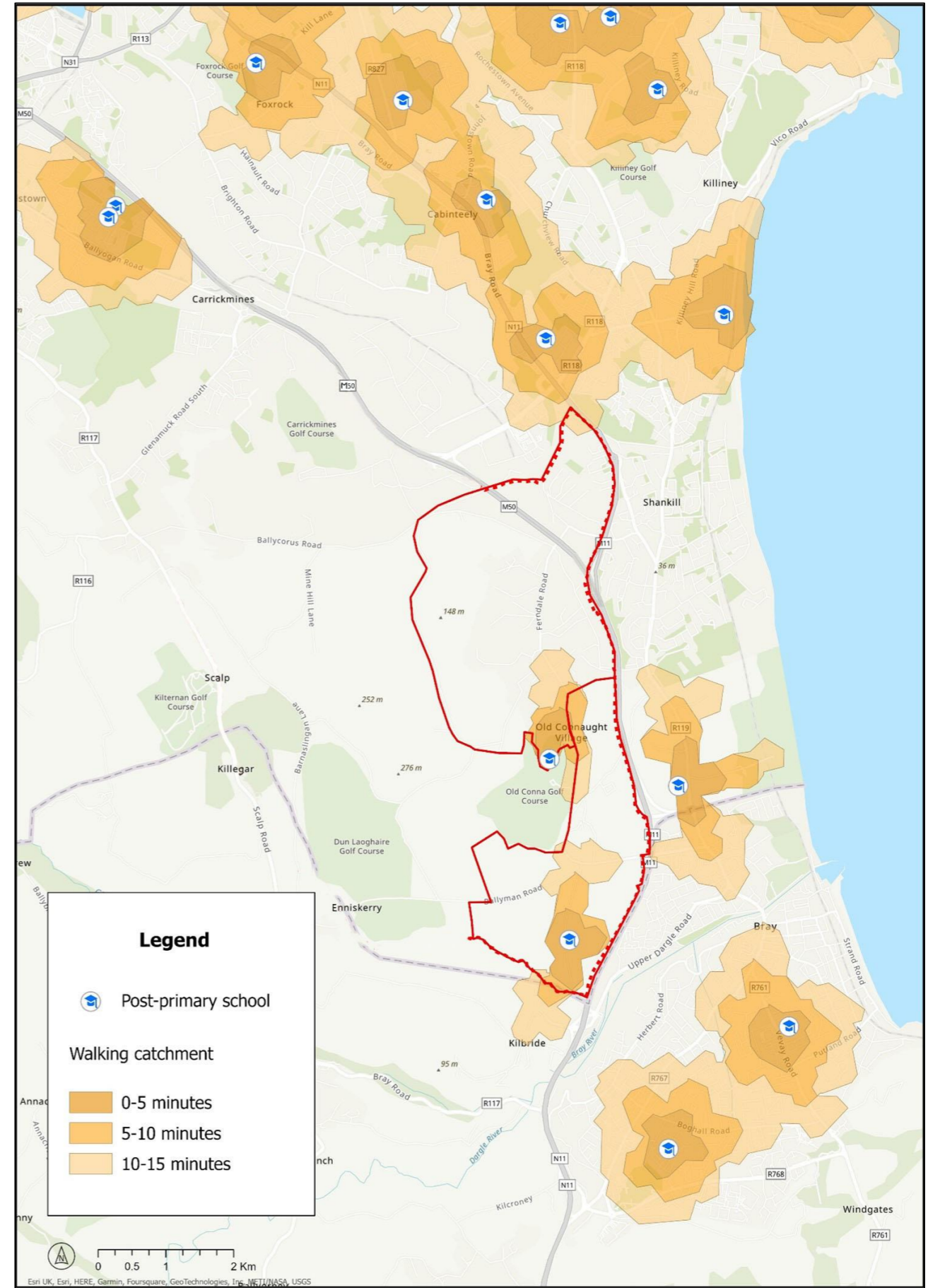


Figure 3-25 Post-Primary School Walking Catchments

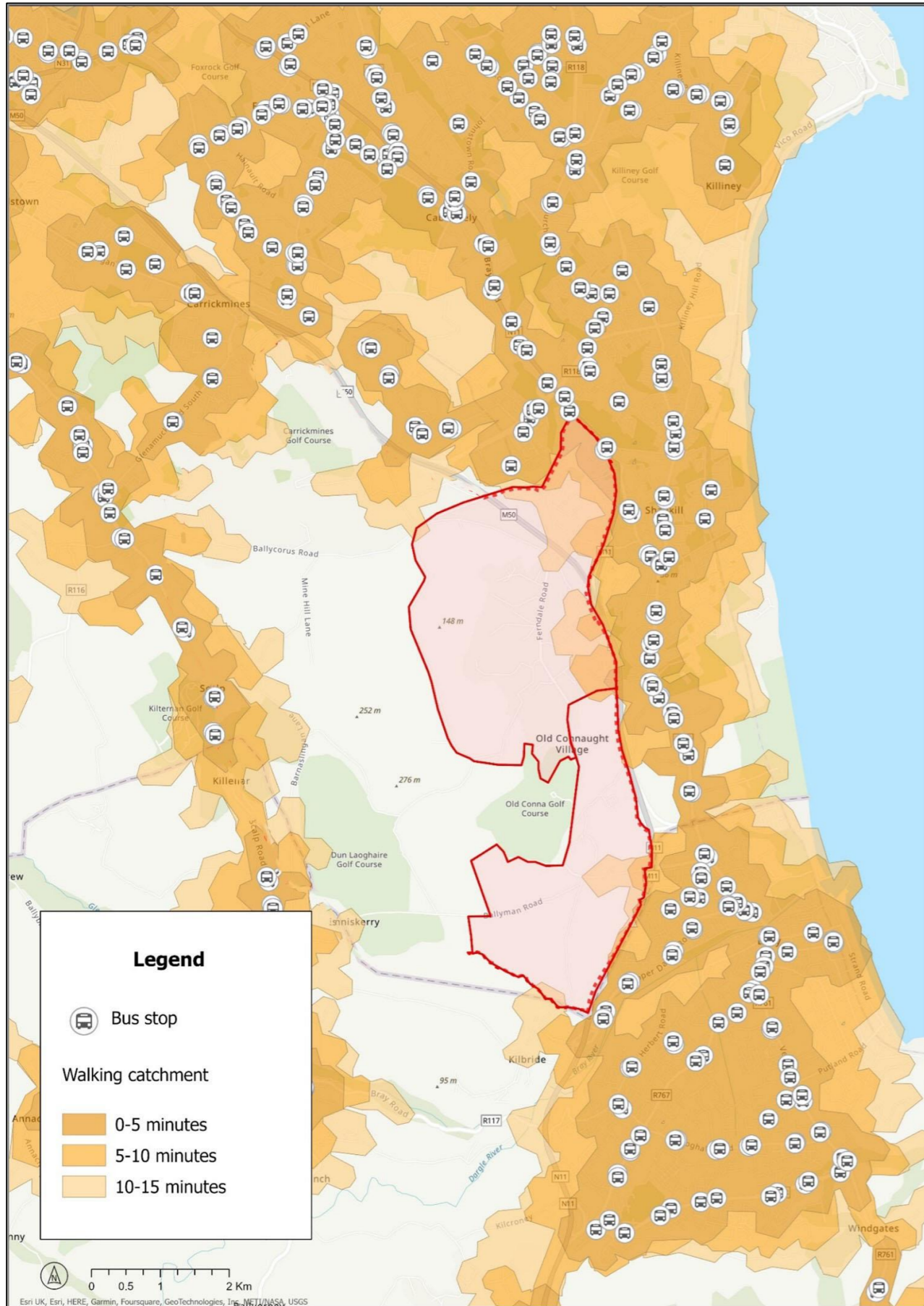


Figure 3-26 Bus stop Walking Catchments

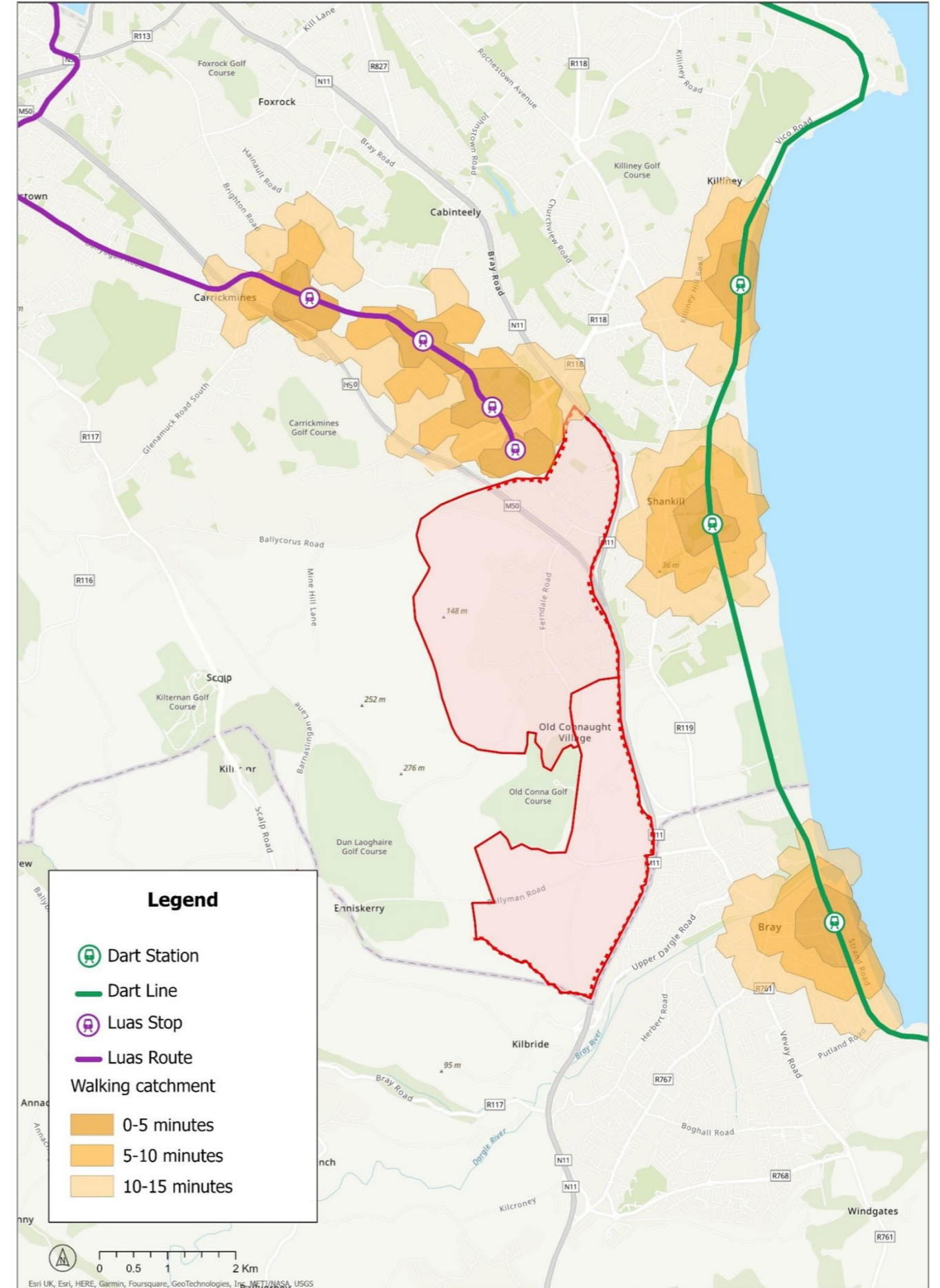


Figure 3-27 DART and Luas station Walking Catchment

3.5.3 Cycling

At present there are no cycling facilities within the two LAP areas. The cycle network proposed within the two LAP areas and surroundings, to be delivered by 2042 as part of the GDA Transport Strategy 2021 is shown in Figure 3-28. Figure 3-29 and Figure 3-30 shows the cycle catchment analysis to primary and secondary schools while Figure 3-31 shows the cycling catchment to bus stops and Figure 3-32 shows the cycling catchment to Luas Stations.

3.5.3.1 Constraints

- No formal cycle network in the two LAP areas
- Lack of permeability connections
- Lack of safe crossings and facilities (especially at roundabouts)
- Lack of wayfinding and legibility
- Hilly topography
- Many roads within the LAP areas are of rural nature with poor sightlines
- Lack of cycle connections to key destinations (i.e. schools, town centres of Bray, Cherrywood and Shankill, train station at Shankill and Bray, Luas stop at Brides Glen); and
- Limited cycling facilities in the two LAP areas

3.5.3.2 Opportunities

- New links and connections would make cycling an attractive option (e.g. from local schools/employment zones to residential areas)
- Opportunity to develop greenways and/or off-street cycle facilities to encourage use by all ages, genders and abilities for multiple uses
- Improve cycling safety for existing and future residents within and surrounding the LAP areas
- Establish cycling routes to Strategic Employment Locations at Cherrywood, Carrickmines and the Key Town of Bray
- Establish cycle linkages with transport nodes including the Brides Glen Luas Station, in line with SLO 150 from CDP
- Encourage the use of electric bikes to make cycling easier on hilly topography in the two LAP areas
- Investigate potential cycle linkages with recreational amenities and sporting facilities including Stonebridge Road, Shanganagh Park, Ticknick Park and Rathmichael Wood
- Delivery of Cherrywood Active Travel projects, East Coast Cycle Trail and others in early phases;
- Provide pedestrian/cycle access across the M11 corridor in the vicinity of Allies River Road (in accordance with SLO 108) and at Love Lane Bridge
- Connect the two LAP areas to current and future cycle facilities, particularly to the east of the N11/M11/M50; and
- Wide traffic lanes could be narrowed to provide cycling infrastructure (including shared paths) where appropriate

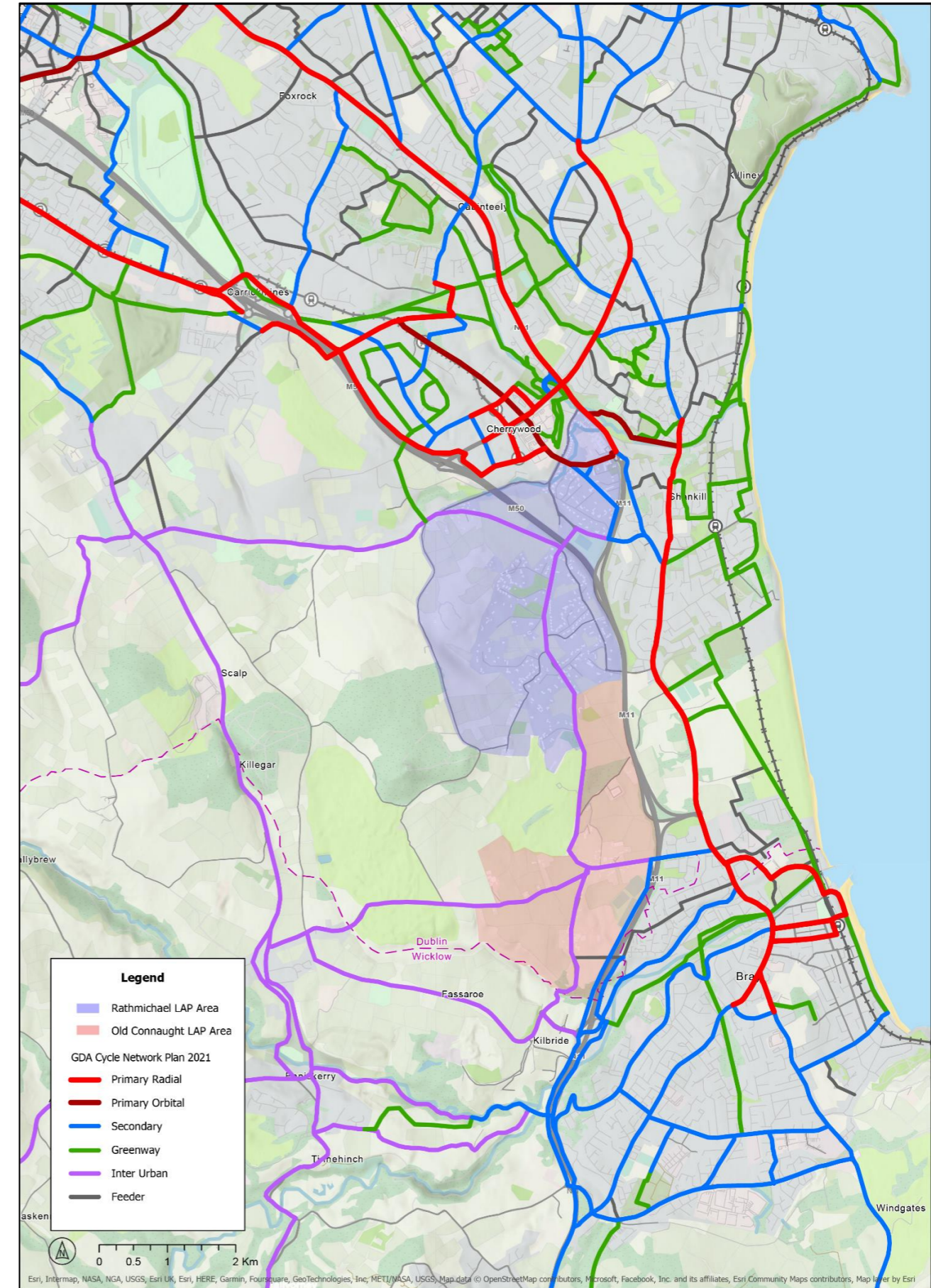


Figure 3-28 Proposed Cycling Network from GDA cycle network plan

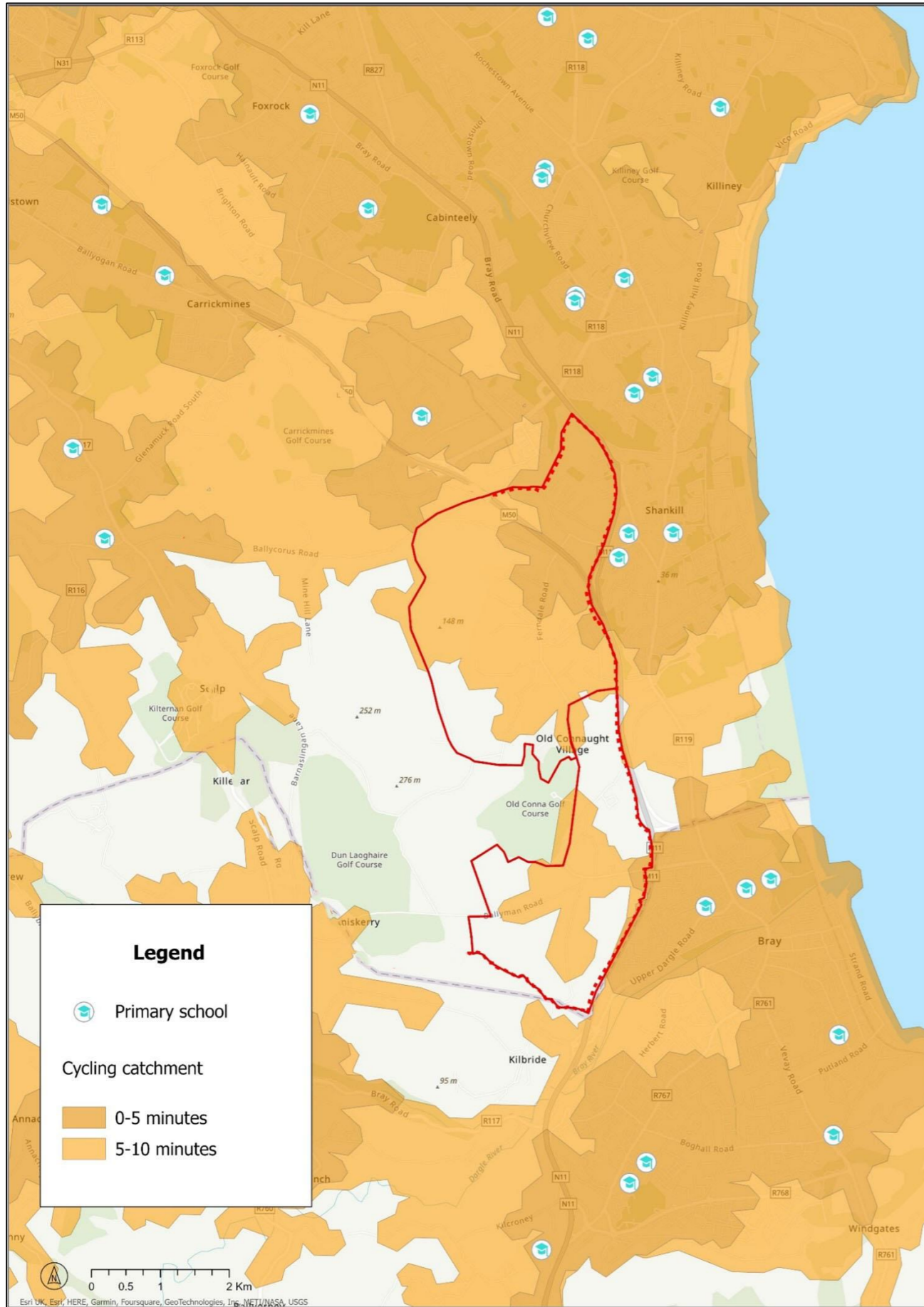


Figure 3-29 Primary School Cycling Catchments

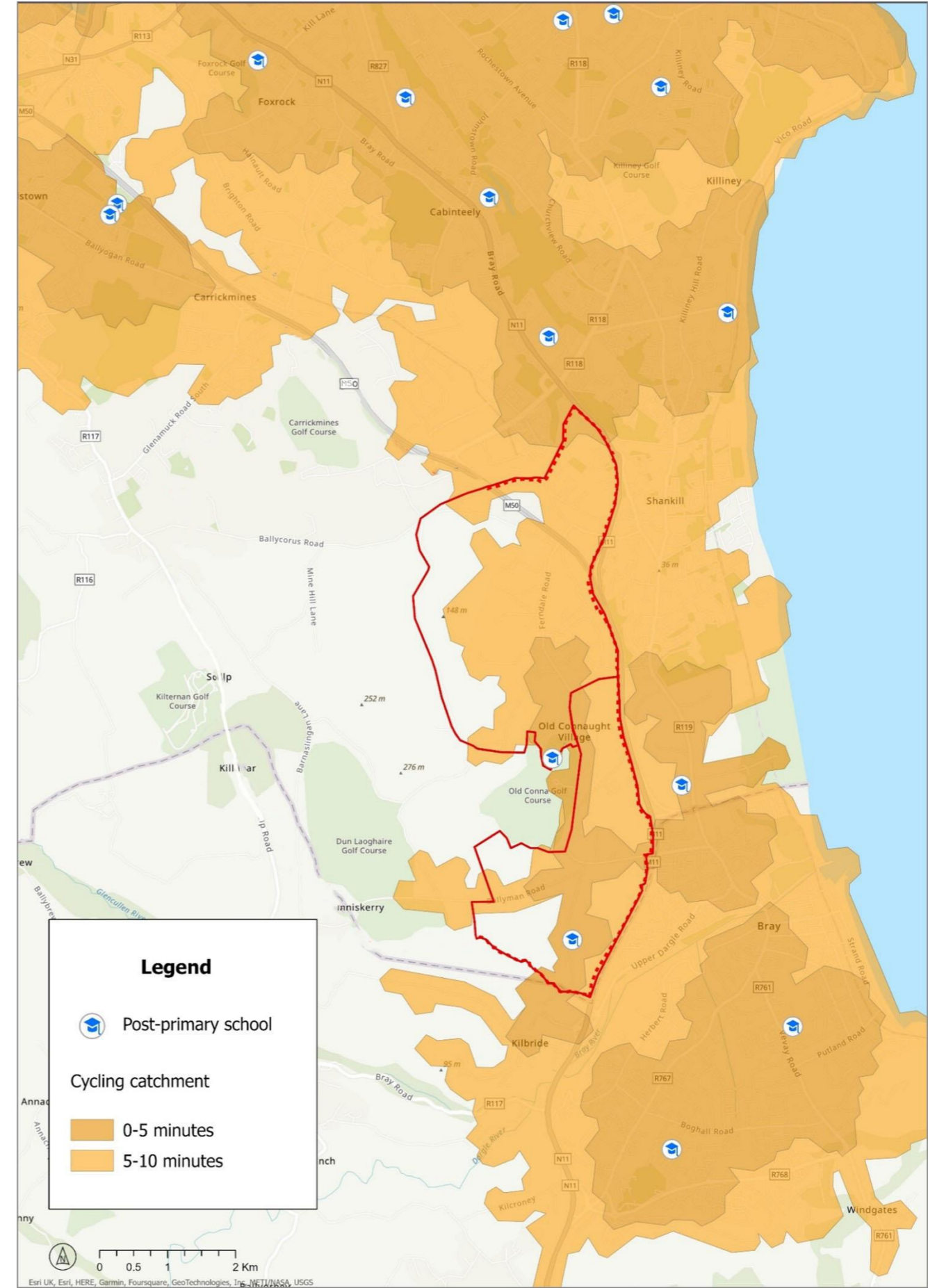


Figure 3-30 Post Primary School Cycling Catchment

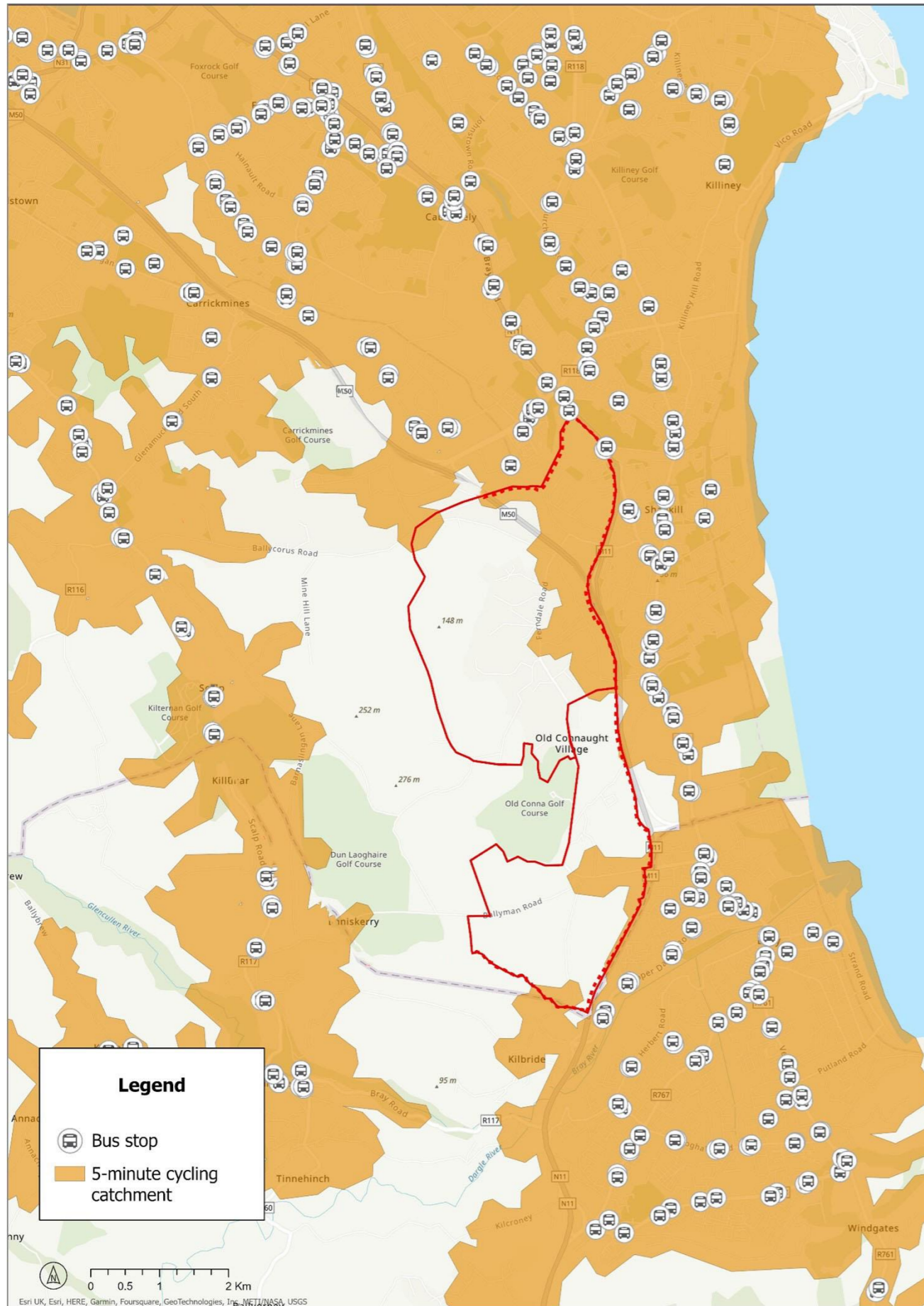


Figure 3-31 Bus Stops Cycling Catchments

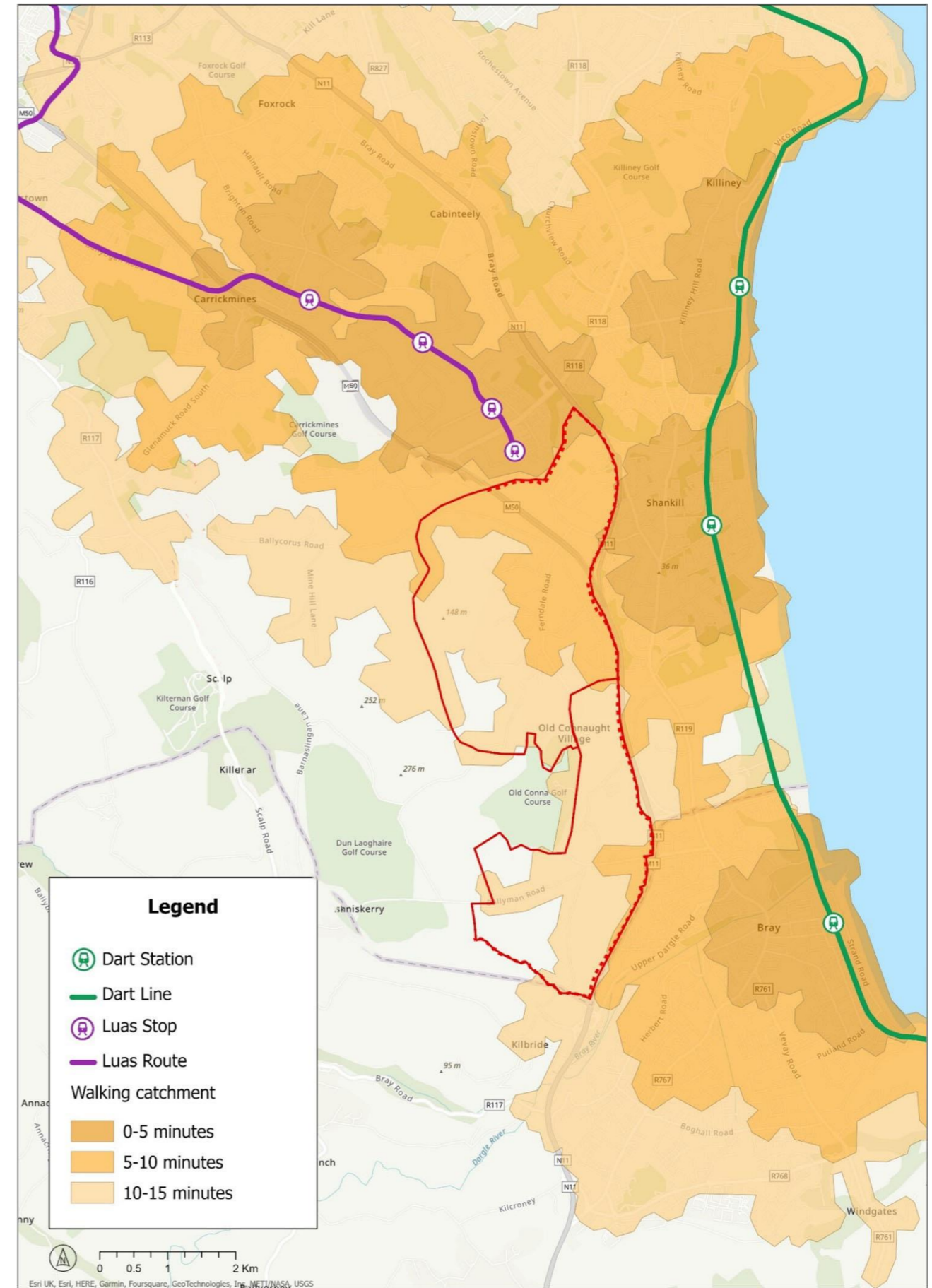


Figure 3-32 DART and Luas Station Cycling Catchment

3.5.4 Bus

The two LAP areas are currently not serviced by public transport. The nearest services are those outlined in Table 3-6, which all runs to the east of the LAP areas. Figure 3-33 shows the current bus network within the vicinity of the LAP area.

Table 3-6 Bus Services from Shankill Area

Operator	Service	Frequency	Journey Time to Dublin City Centre (off-peak)
Dublin Bus	145 – Heuston Station to Ballywaltrim	Every 10 minutes	~1 hour
Dublin Bus	155 – Ikea to Bray	Every 20 minutes	~1 hour
Go Ahead	111- Brides Glen – Dún Laoghaire - Dalkey	Hourly	N/A

As part of the BusConnects Dublin Network Redesign programme, the current bus routes in the vicinity of the LAP areas will be altered, along with new routes proposed as shown in Figure 3-34. The current 145/155 route which runs through Bray, Shankill, and along the N11 is proposed to be replaced with the ‘E Spine’ which will introduce higher frequencies than the current routes. In addition, new express buses, the X1 and X2, are proposed to run along the M11/N11, bypassing Bray and Shankill for shorter journey times from areas such as Greystones to the south.

3.5.4.1 Constraints

- No bus services serve the two LAP areas; and
- Access to rail line currently only via car, long walk or cycle to stations

3.5.4.2 Opportunities

- Investigate potential for bus routes to serve the two LAP areas
- Access potential for bus services to connects to the high-quality bus and rail corridors east of the N11; and
- Provide active travel connections to appropriate bus stops along Dublin Road

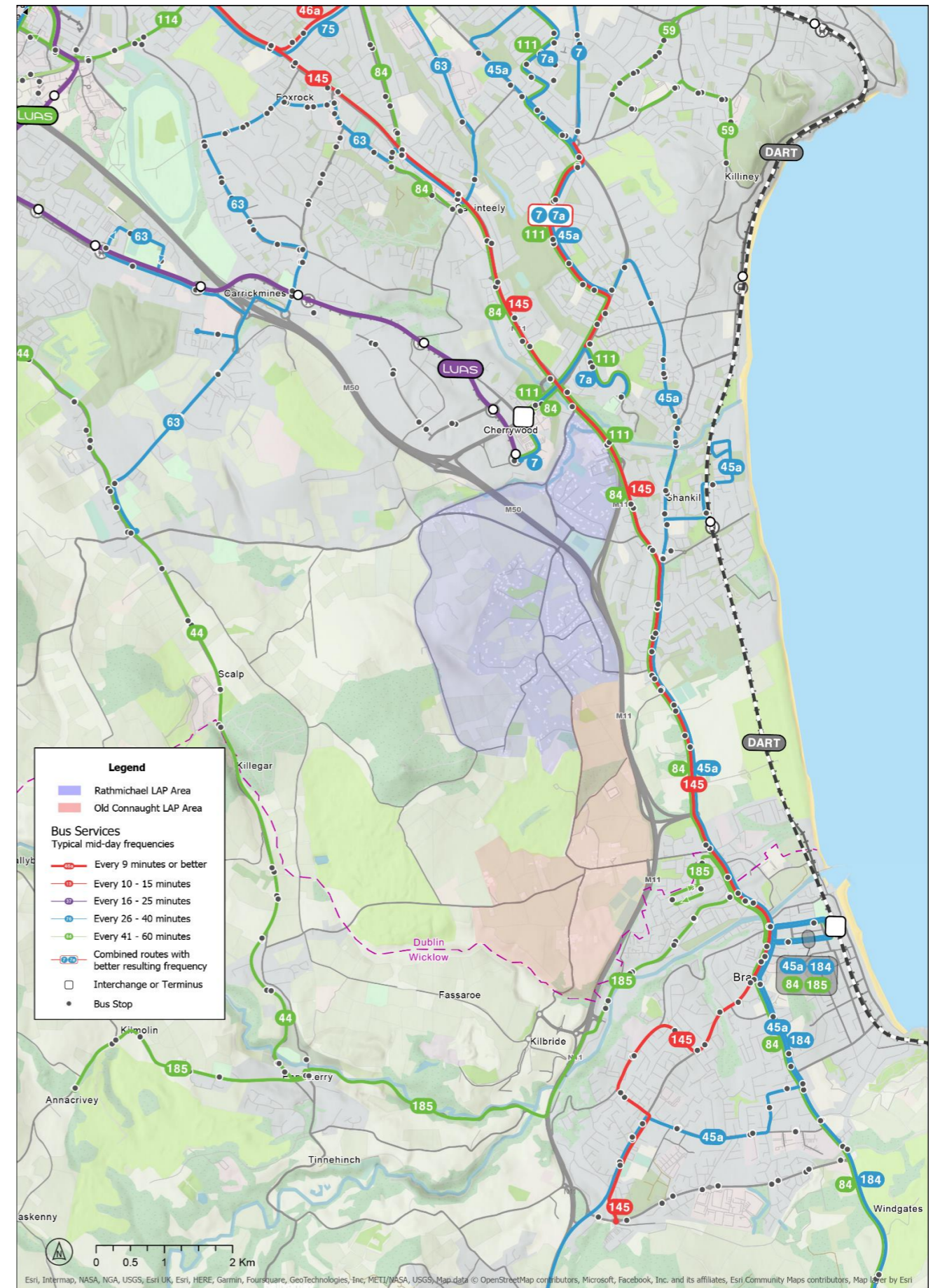


Figure 3-33 Existing Bus Routes (Data from BusConnects Network Redesign)

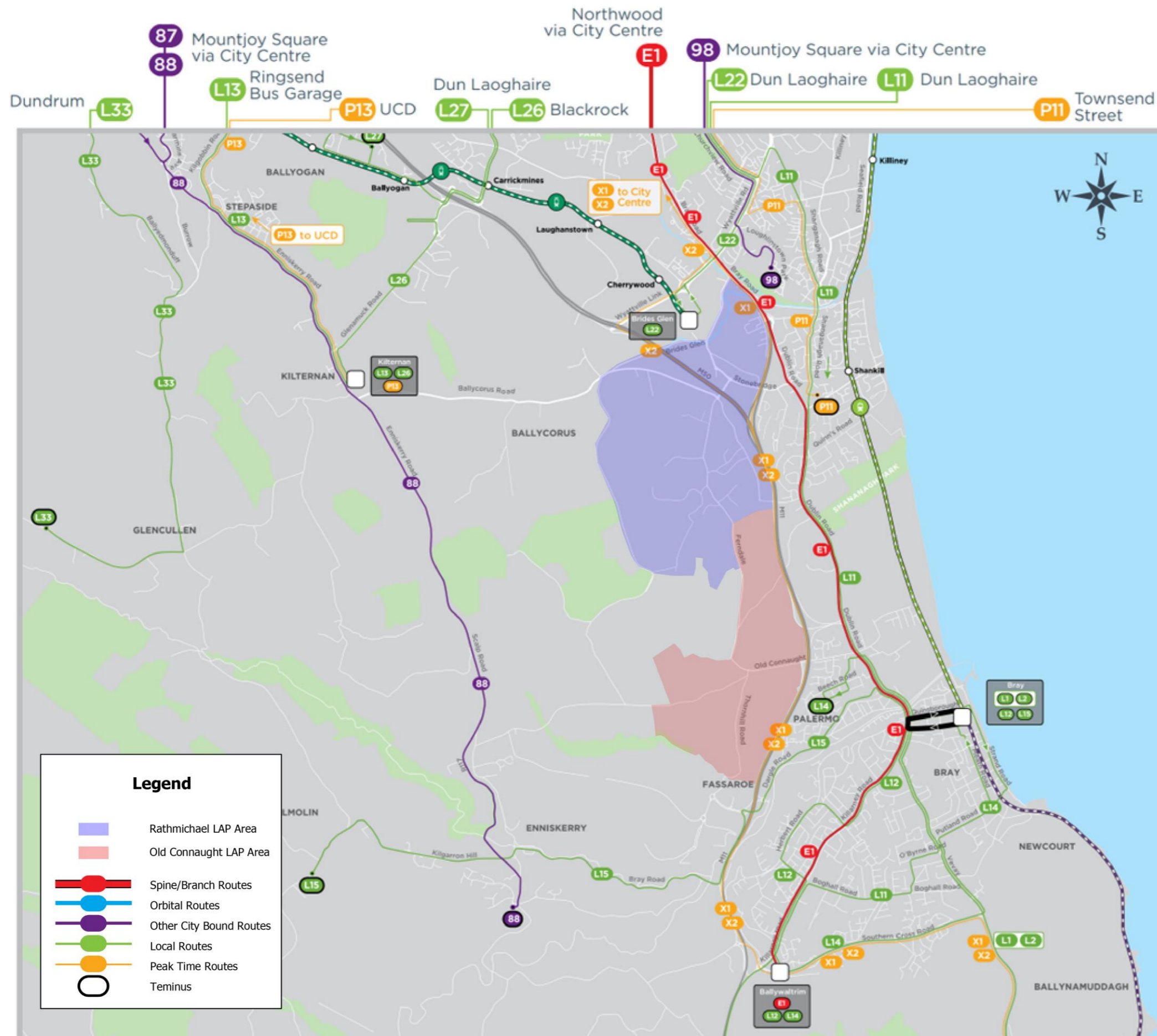


Figure 3-34 BusConnects Network Redesign Proposed Routes (Extract from BusConnects Network Redesign)

3.5.5 Rail

The nearest existing DART stations to the two LAP areas are Shankill and Bray to the east. A new station is planned at Woodbrook, which is halfway between the existing Shankill and Bray stations. Planning permission has been granted for the station in 2021.

The Luas green line terminates at the north of Rathmichael LAP area at the Brides Glen station. There are future plans to extend the line to Bray via the eastern boundary of the two LAP areas, see Figure 3-35. This is marked as a medium-term project, 2031-2036, in the GDA Transport Strategy 2022-2042.

A map of the proposed Luas and rail network is provided, Figure 3-35. The frequencies of both Luas and rail services are provided in Table 3-7.

Table 3-7 Rail services adjacent to the two LAP areas

Operator	Service	Frequency	Journey Time
Irish Rail	Greystones – Howth / Malahide	~10 minutes	~40 minutes to Dublin City Centre
TII / Transdev	Brides Glen to Parnell	~10 minutes	~45 minutes to Dublin City Centre

3.5.5.1 Constraints

- No DART or Luas connection through the two LAP areas; and
- Existing connections to DART and Luas are lengthy and circuitous, each with an approximately 30 minute walk from the centre of the relevant study area

3.5.5.2 Opportunities

- Utilising proposed Luas extension route as outlined in the NTA GDA Strategy 2022-2042
- Investigate potential for alternate Luas extension route through the two LAP areas
- Provide active travel connection to Luas stop at Brides Glen; and
- Provide active travel connections to proposed DART station at Woodbrook

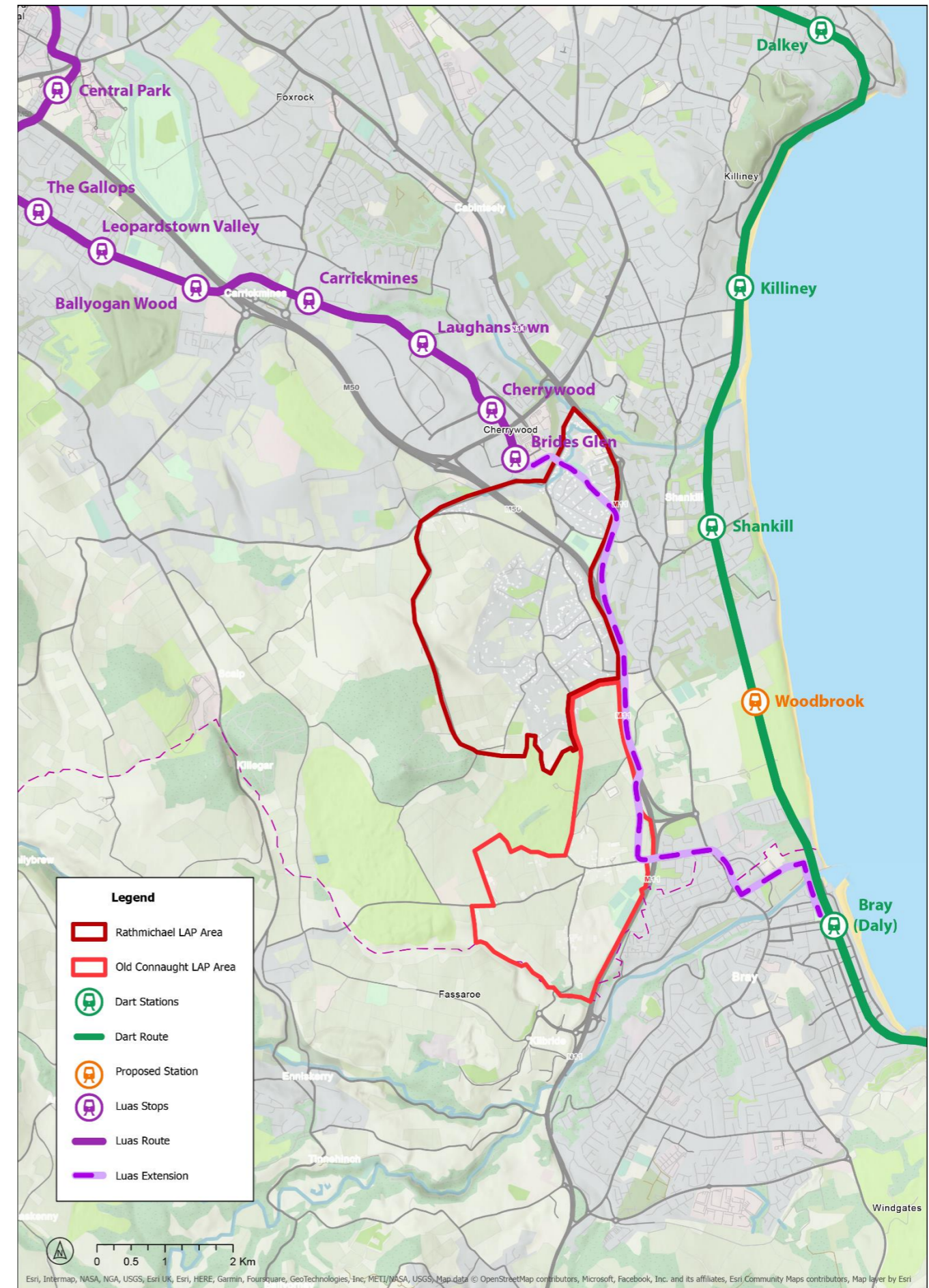


Figure 3-35 Existing and Proposed Rail and Luas Infrastructure

3.5.6 Road Network

3.5.6.1 Overview

The road network and hierarchy in the two LAP areas is shown in Figure 3-36. The M11/N11 forms the eastern boundary of the two LAPs. The junction of the M11 and M50 is situated along this boundary, where the M50 bisects the northern part of the site. The R116 is the only regional road within Rathmichael, which runs along Cherrywood Road, Mullinastill Road, Rathmichael Road and Ballycorus Road. Local roads within the site are Stonebridge Road, Brides Glen Road, Ballybridge Road, Ferndale Road, Old Connaught Avenue, Ballyman Road, and Thornhill Road. The remainder of the roads are undefined/residential style roads.

Overall, the roads in the two LAP areas are narrow, single carriageway roads with limited formal pedestrian and cyclist infrastructure.

Traffic Counts

Preliminary traffic count data from 2019 was obtained from the previous Old Connaught Transport Study. Figure 3-37 and Figure 3-38 show the total traffic at each of the Junction Traffic Count (JTC) locations in the AM and PM peaks respectively. Figure 3-39 and Figure 3-40 show the total traffic at each of the Automatic Traffic Counter (ATC) locations in the AM and PM peaks respectively.

Traffic volumes are relatively low within the two LAP areas, with the highest volumes observed at the junction of Ferndale Road and Thornhill Road at almost 1,000 vehicles passing through the junction in the AM peak and almost 600 in the PM peak.


The M50 Junction 16 to the north of the Rathmichael LAP area has the highest traffic volumes in the two LAP areas, with volumes of almost 7,000 in the AM and over 5,000 in the PM. However, the majority of these vehicles are likely to be free-flowing vehicles passing along the M50 mainline.






The signalised junction of Dublin Road, Corke Abbey Avenue, and Old Connaught Avenue has the largest observed volumes nearby, with a volume of almost 2,000 vehicles in the AM and PM peaks. A number of other junctions along the Dublin Road through Bray and Shankill have relatively large volumes of 1,000 to almost 2,000 across both AM and PM peaks. Therefore, the potential increase in housing in Old Connaught and Rathmichael, along with increase in background traffic in surrounding areas may cause traffic congestion.





Bridges/Underpasses

A summary of the bridge crossings and underpasses across the M50 and N11/11 are summarised in Table 3-8. There is a total of nine crossings, with six vehicular crossings (some with pedestrian facilities) and three pedestrian/cycle crossings.

Table 3-8 High level characterisation of bridges and underpasses in the two LAP areas

Bridge Location	Bridge Type	Carriage way Type	Footpaths	Cycle Facilities	Images (Source: Google Maps)
Lehaunstown Lane (crossing M50) currently closed	Vehicular	Single	Yes (approx. 1.6m)	No	

Bridge Location	Bridge Type	Carriage way Type	Footpaths	Cycle Facilities	Images (Source: Google Maps)
R118 Wyatville Road (crossing N11)	Vehicular	dual	Yes (approx. 2m)	Yes.	
N11 (under R118 Wyatville Road)	Pedestrian/cycle	N/A	Yes (approx. 1.8/2.9m)	Yes. There is a two-way cycle lane adjacent to the N11, also with pedestrian footpath at the western side of the N11. There is a pedestrian route/cycleway that extends between Cherrywood and Bray Road	
Brides Glen Road (Under M50)	Vehicular	Single	No	No	
Loughlinstown Hospital (crossing N11)	Pedestrian/cycle	N/A	Yes	Yes	
Stonebridge Road (crossing M50)	Vehicular	Single	Yes (approx. 2.4m)	No	

Bridge Location	Bridge Type	Carriage way Type	Footpaths	Cycle Facilities	Images (Source: Google Maps)
Stonebridge Road (crossing M11)	Vehicular	Single	Yes (approx. 2.6/1.3m)	No	
Lordello Road (crossing M11/M50)	Pedestrian/cycle	N/A	Yes (approx. 2.3m)	Yes	
Crinken Lane (crossing M11)	Vehicular	Single	Yes (approx. 1.5m)	No	
Old Connaught Avenue (crossing M11)	Vehicular	Single	Yes (approx. 1.6m)	No	

3.5.6.2 Constraints

- Motorway network as physical barrier
- No direct connections from two LAP areas onto the M11 or M50
- Adequacy of existing local road network to facilitate residential development at scale
- High level of existing car dependency and ownership within the two LAP areas
- Rural nature of existing roads
- Hilly topography; and
- High traffic volumes through nearby junctions

3.5.6.3 Opportunities

- Connection to Fassaroe would enhance connectivity to the south;
- Enhance the safety of the existing road network; and

- Potential direct/indirect connection to M50 and Cherrywood via new western connection.

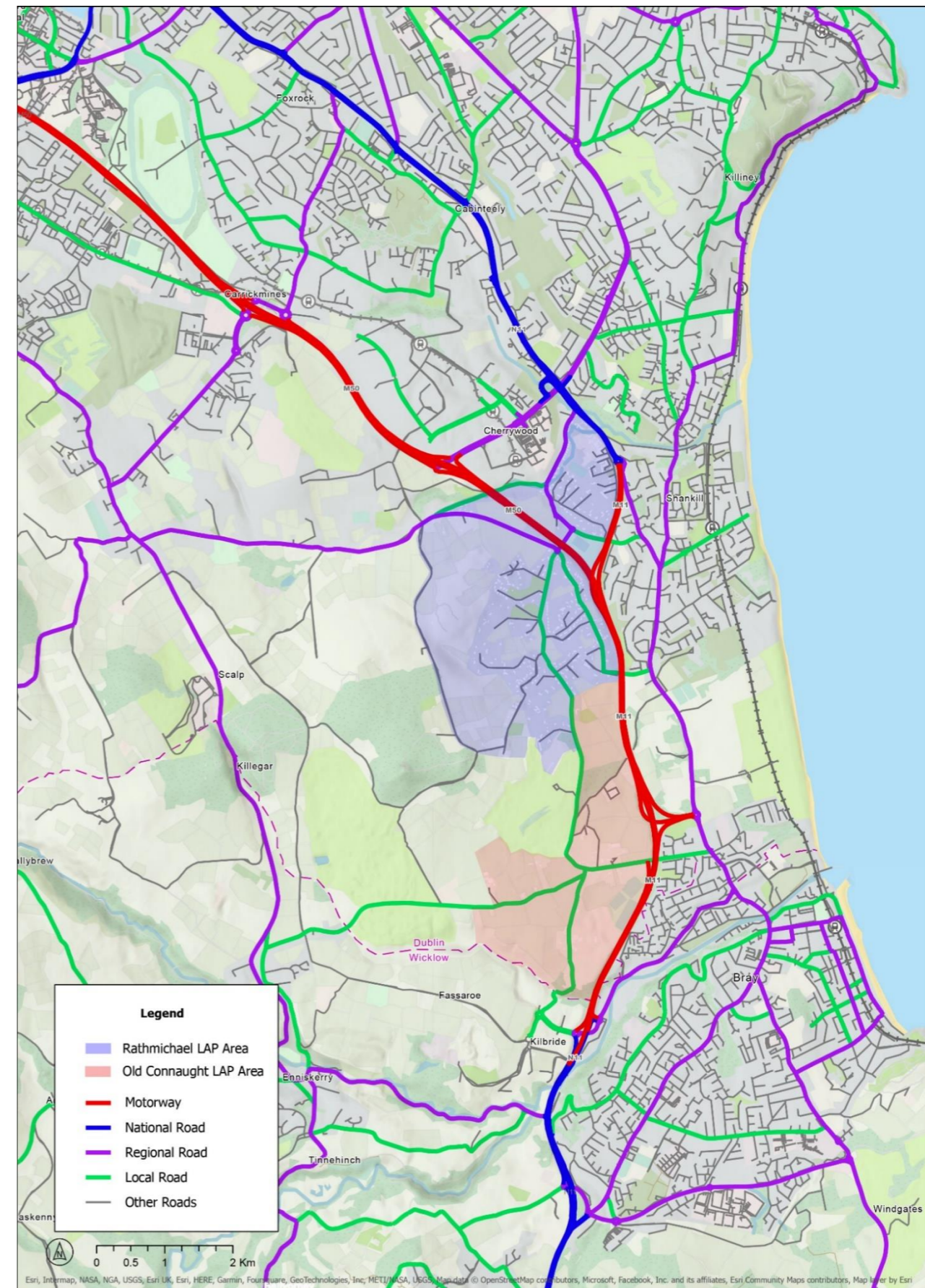


Figure 3-36 Road Network in the two LAP areas

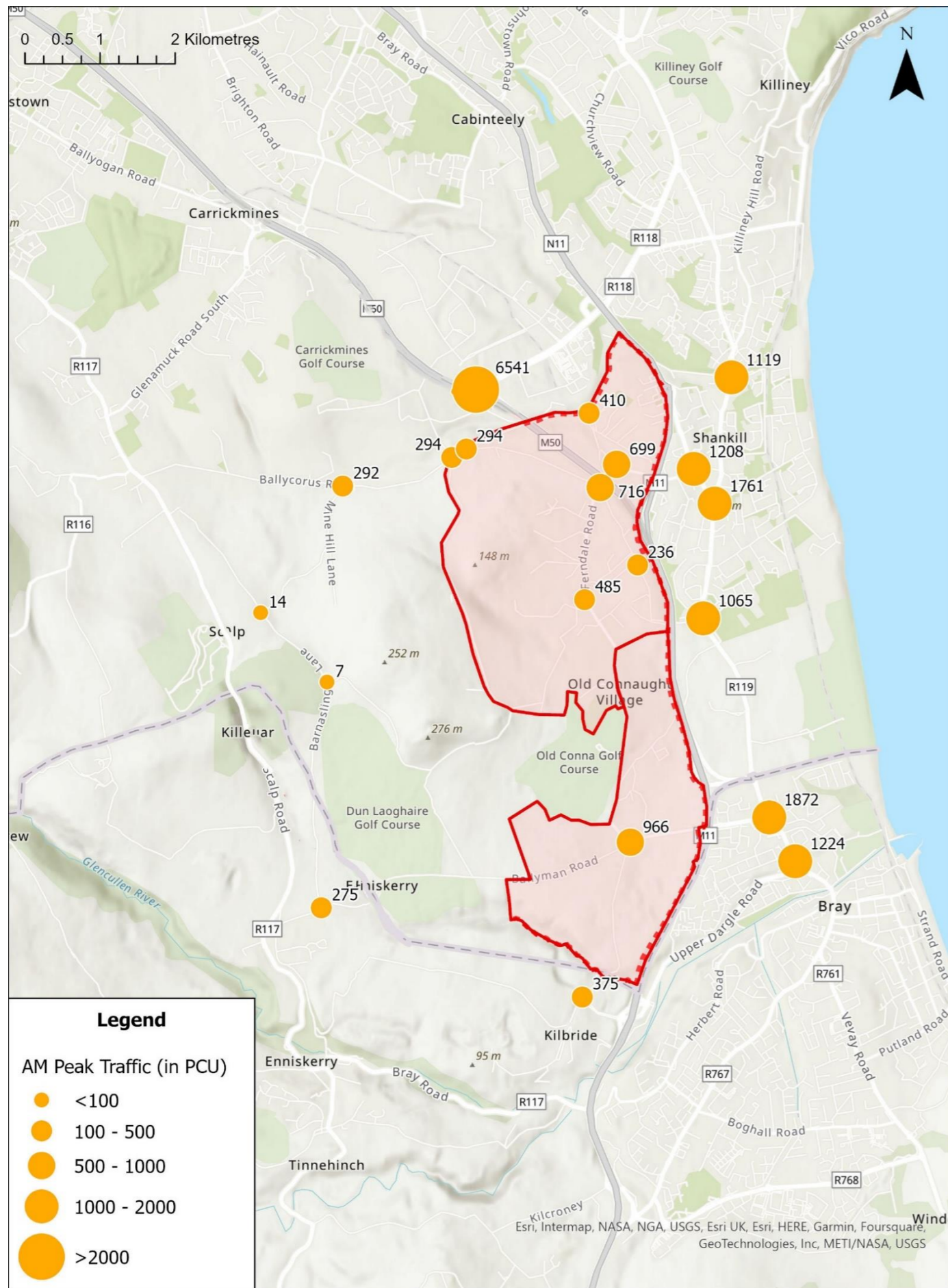


Figure 3-37 Total traffic at JTC locations during the AM peak period (08:00 – 09:00)

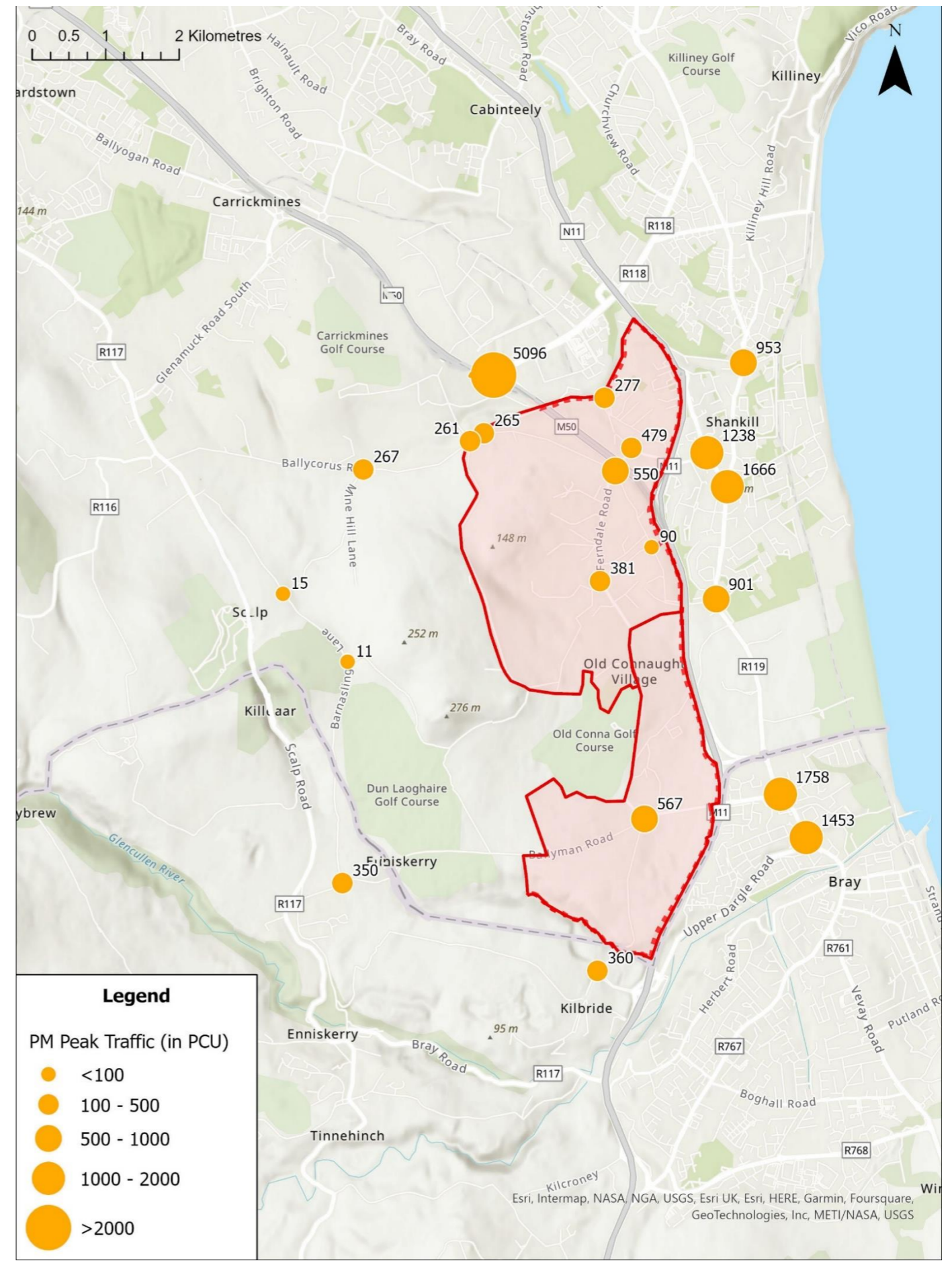


Figure 3-38 Total traffic at JTC locations during the PM peak period (17:00 – 18:00)

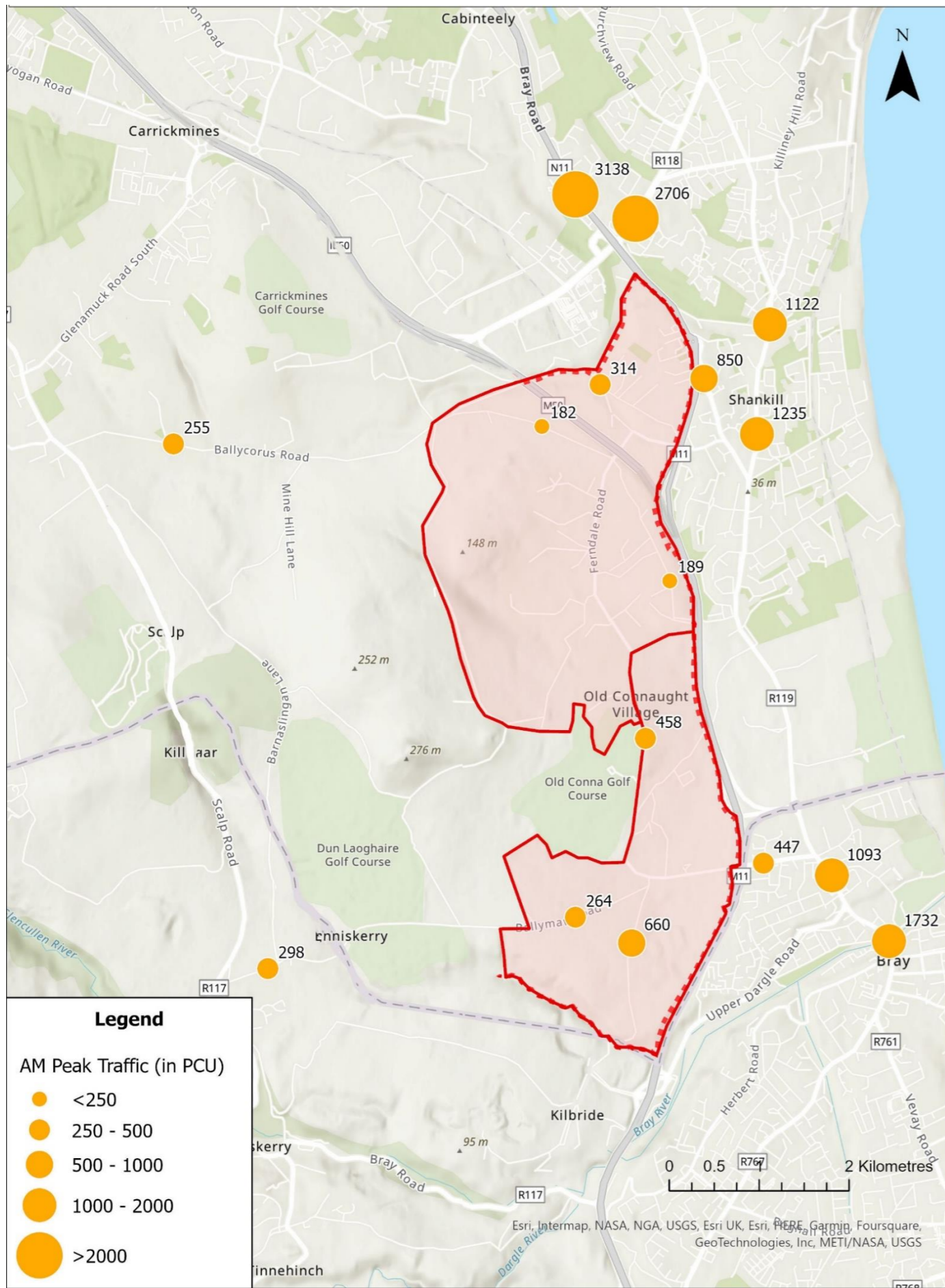


Figure 3-39 Total traffic at ATC locations during the AM peak period (08:00 – 09:00)

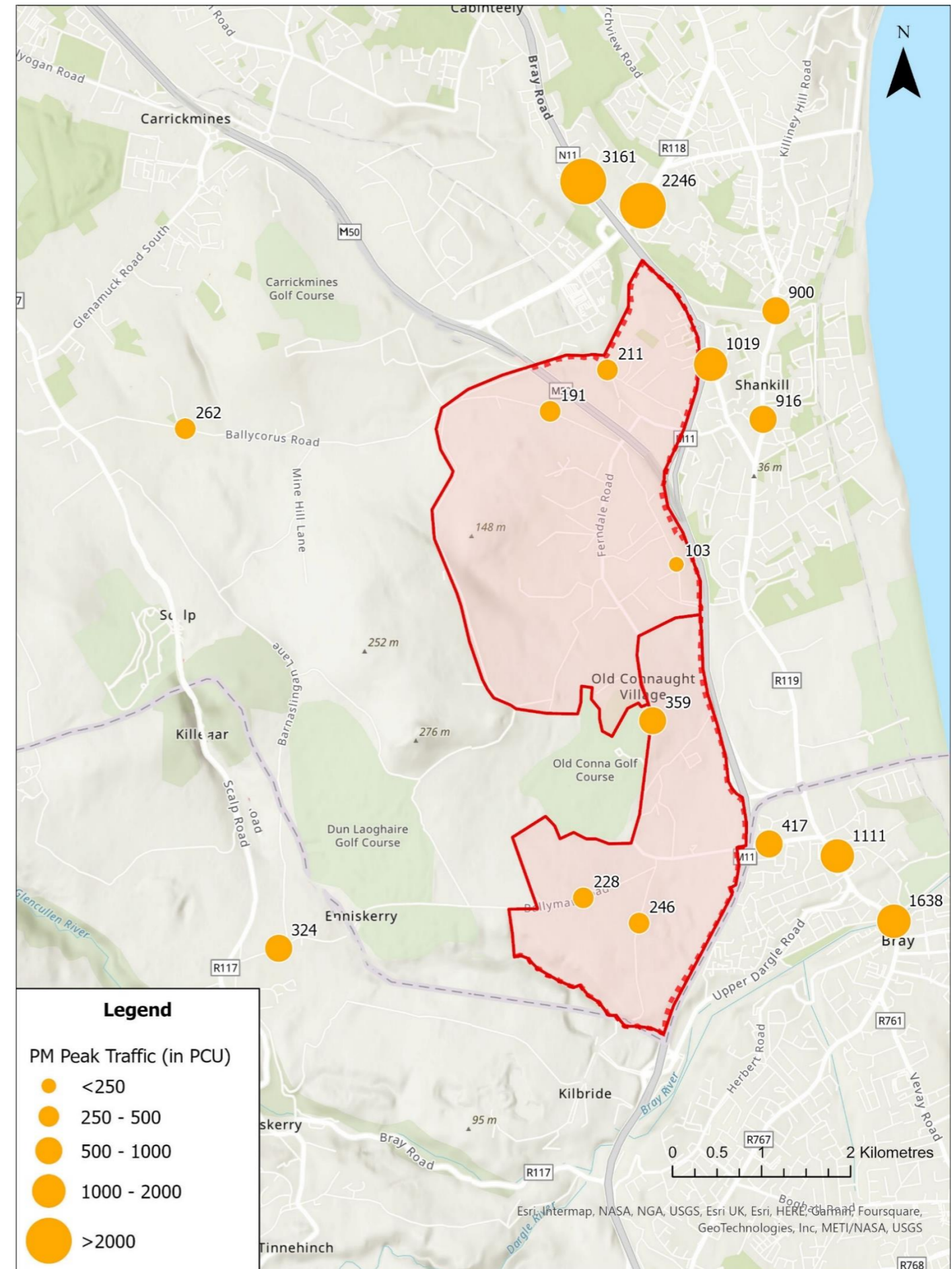


Figure 3-40 Total traffic at ATC locations during the PM peak period (17:00 – 18:00)

3.5.7 Transport Analysis

3.5.7.1 Commuting Journey Time

From the 2016 Census, national average journey time to work or education is 28.2 minutes, which is slightly quicker than the DLRCC average of 30.6 minutes.

As shown in Figure 3-41, approximately 50% of people living in the two LAP areas have commuting trips of less than 30 minutes. The lower journey times are likely owing to the relatively high number of jobs and schools within the immediate vicinity of the two LAP areas, and the high usage of car for commuting trips.

Figure 3-42 shows the commuting trips from Shankill-Rathmichael Electoral District (ED), which indicates that 60% of the trips are within 5km of the two LAP areas.

Constraints

- Most trips to work and school or college are made by car (dominant mode of transport with 68% mode share);
- No formal pedestrian and cyclist infrastructure in the two LAP areas; and
- Existing public transport services do not support significant levels of use for commuters.

Opportunities

- Potential to reduce car dependency with improvements to active travel network;
- Support non-car modes of travel to school;
- Trip destination for work and schools indicate that some car trips can be replaced by active travel and/or enhanced public transport; and
- Post-COVID working patterns such as working from home and remote working hubs.

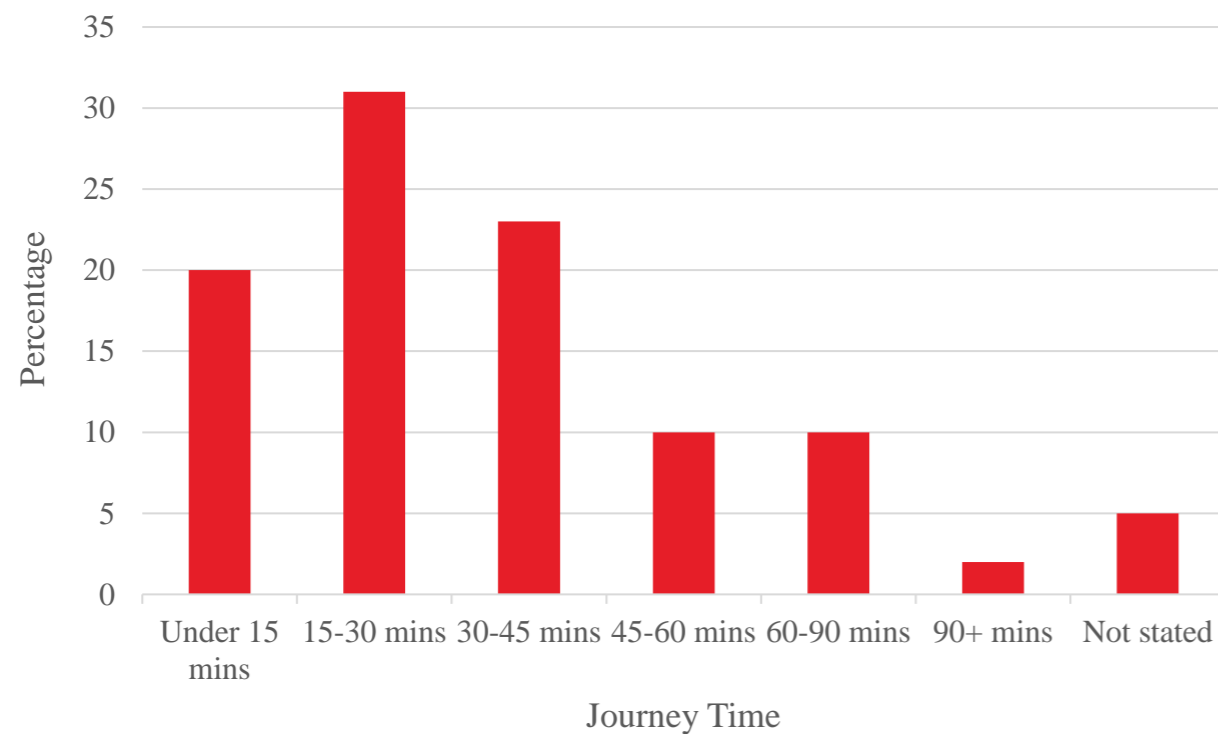


Figure 3-41 Journey time for residents living in the two LAP areas to work/school/college

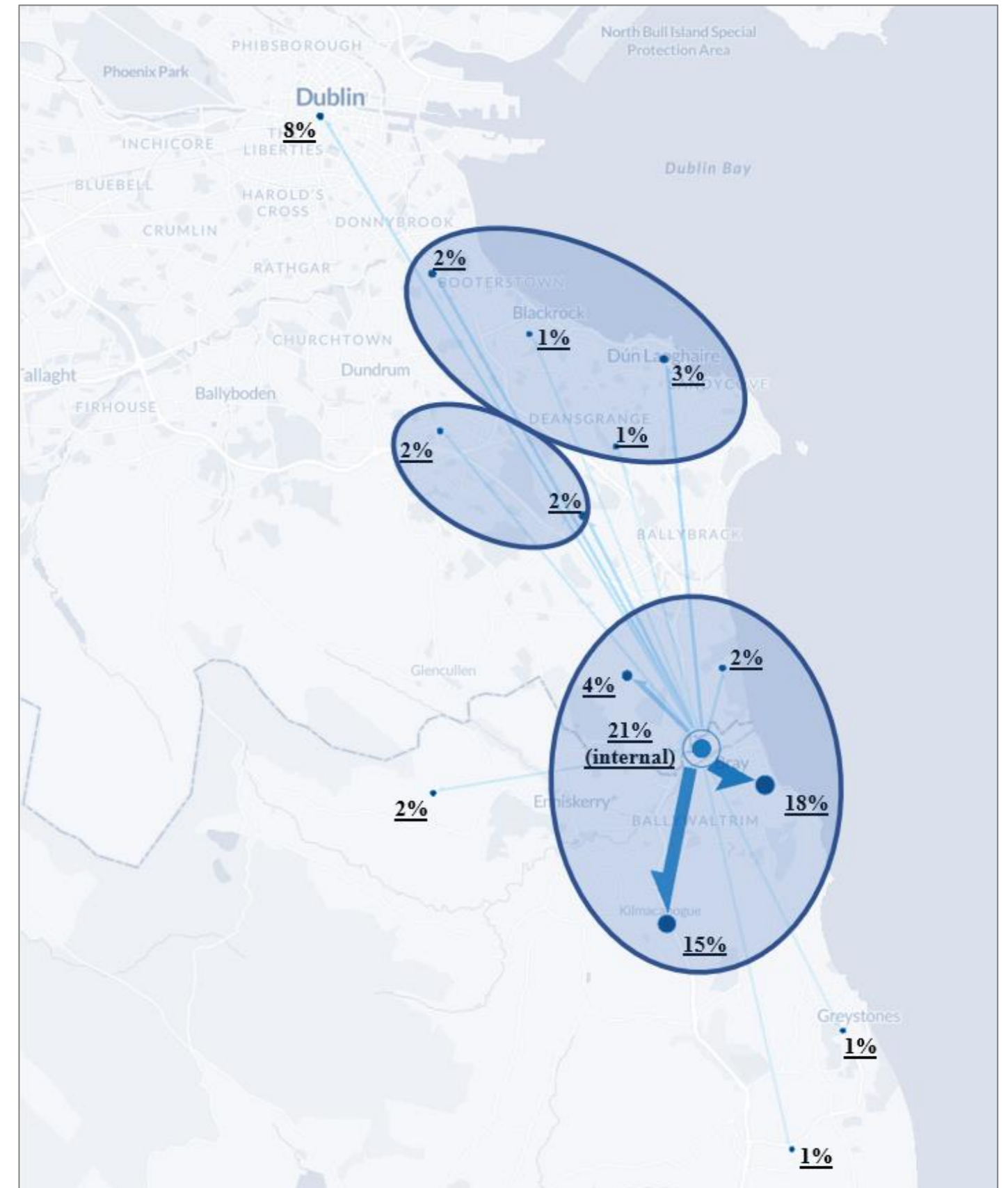


Figure 3-42 Commuting Trips from Shankill-Rathmichael Electoral Division (Census 2016)

3.5.7.2 Modal Split

The modal split for trips to work, schools and college originating in the two LAP areas is shown in Figure 3-43 which can be compared to that of DLRCC shown in Figure 3-44. This includes trips to work/schools outside of the two LAP areas and findings are summarised below:

- The mode split highlights how dependent travel by car is for residents with 68% of all trips by car (drivers and passengers), which is higher than the overall car mode share in DLRCC of 51%.
- Active travel accounts for only 4% of the mode share in the two LAP areas, compared to 19% in DLRCC.
- Trips by public transport account for 17% in the LAP areas compared to 24% in DLRCC. However, due to the distance of the two LAP areas to existing public transport stops (i.e., bus stops, Luas and DART), trips to these locations are most likely undertaken by cars.

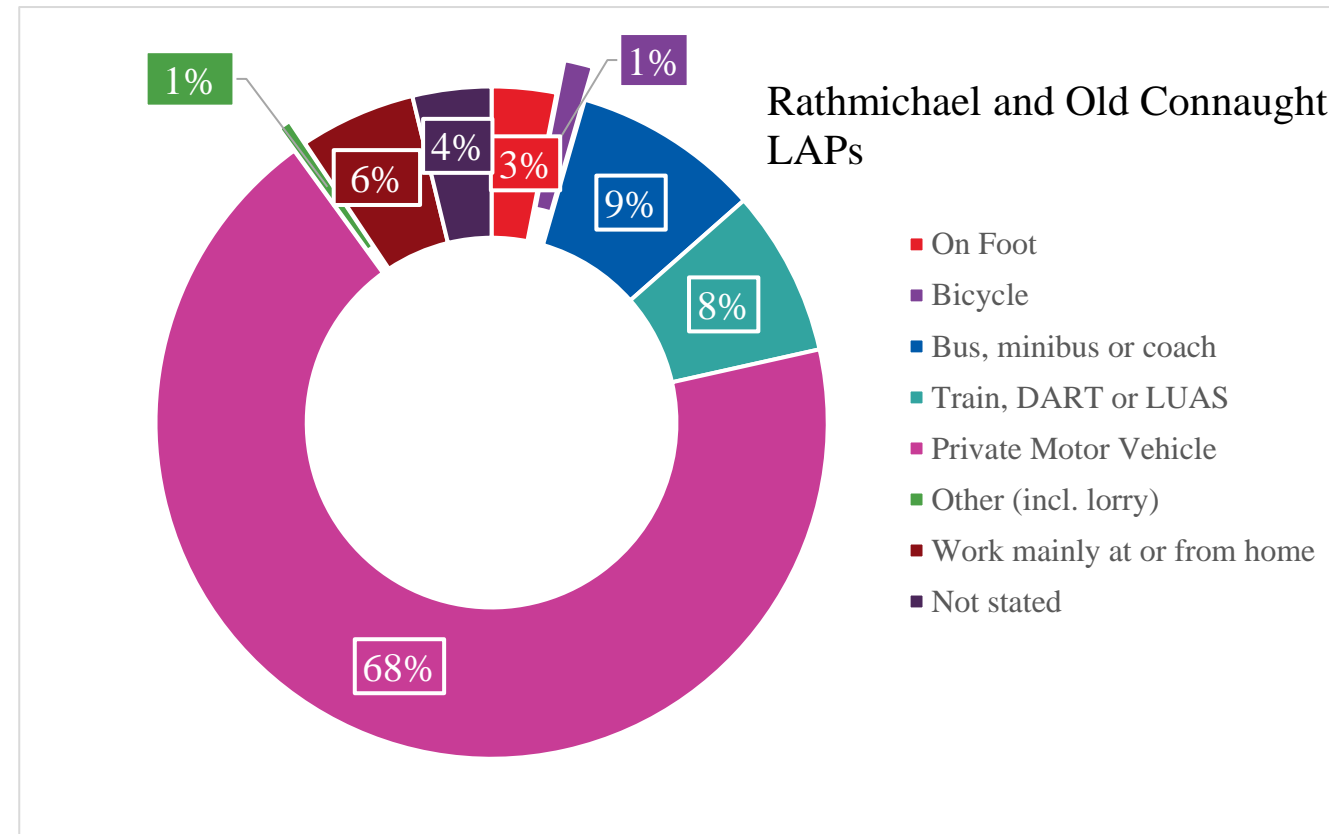


Figure 3-43 Mode Split – Rathmichael and Old Connaught LAPs (Census 2016)

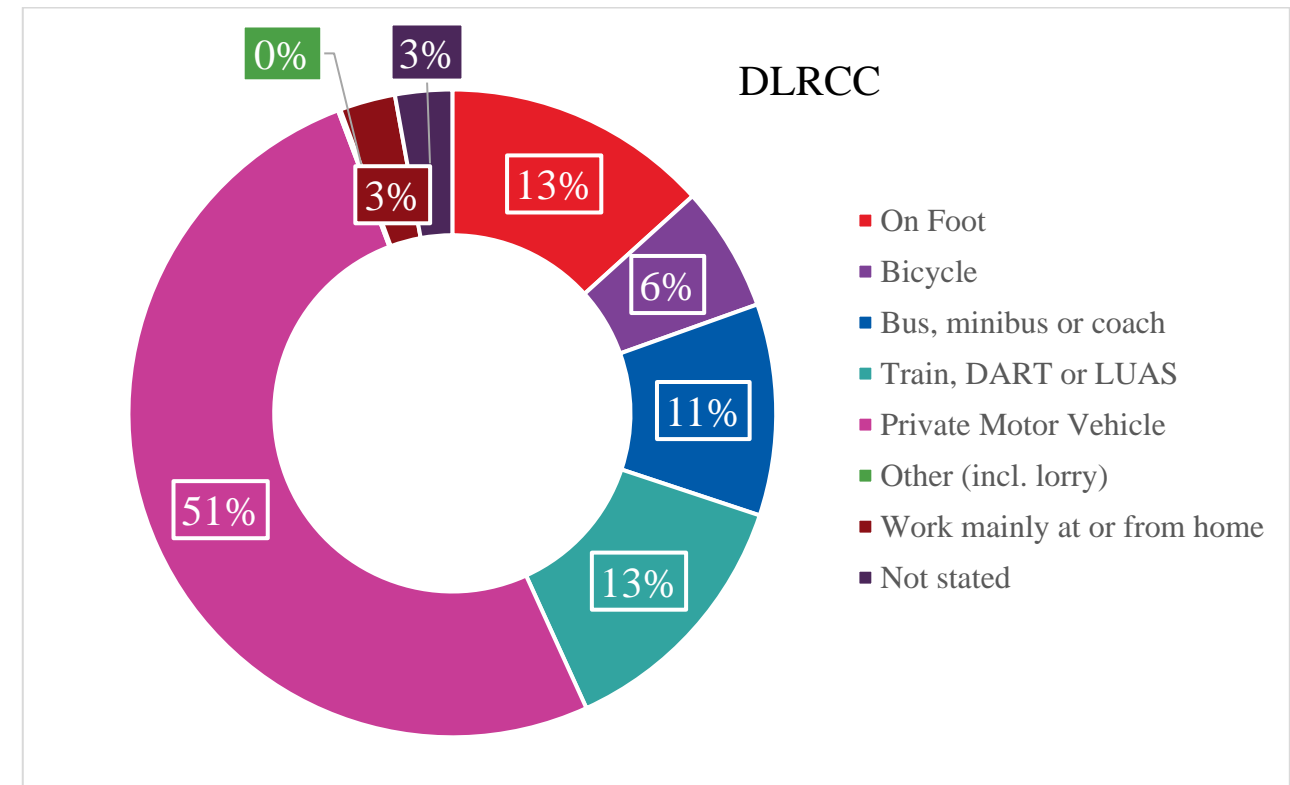


Figure 3-44 Mode Split – DLRCC (Census 2016)

3.5.7.3 Car ownership

Only 2% of households in the two LAP areas do not own a car, as illustrated in Figure 3-45.

This is a significantly lower proportion than the average in DLRCC of 15% and the national average of 12% (see Figure 3-46 and Figure 3-47, respectively). This is especially notable in the context of limited public transport services and the scarce provision of cycling infrastructure.

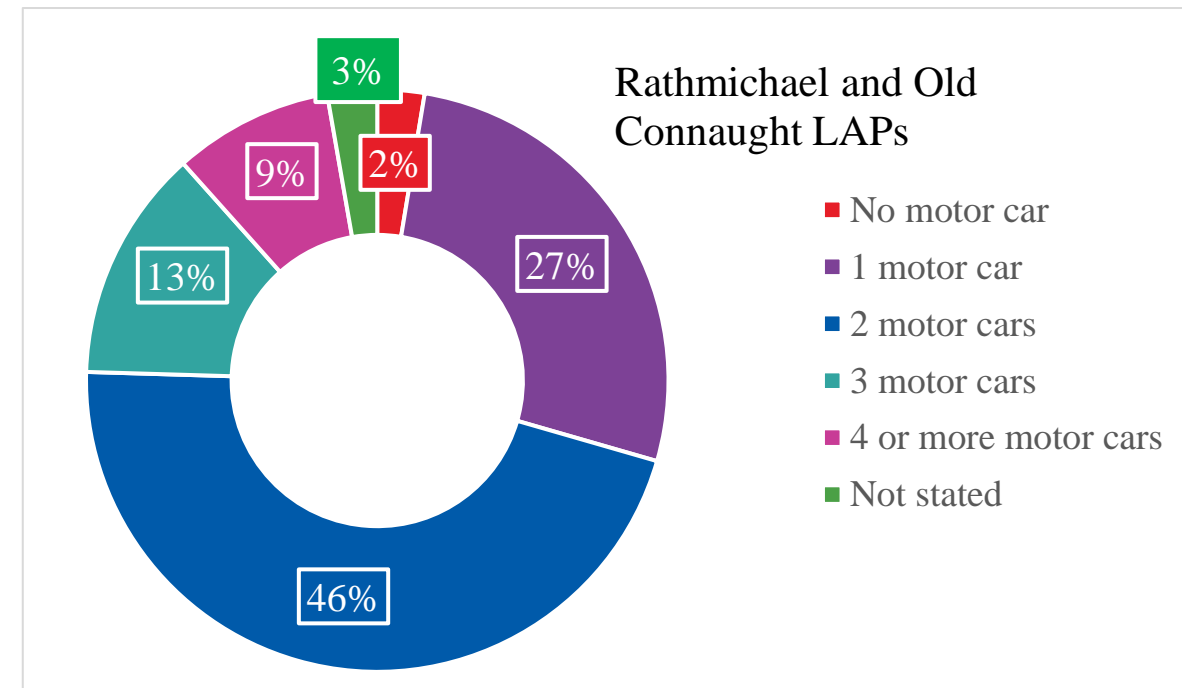


Figure 3-45 Car Ownership Per Household Rathmichael and Old Connaught LAPs (Census 2016)

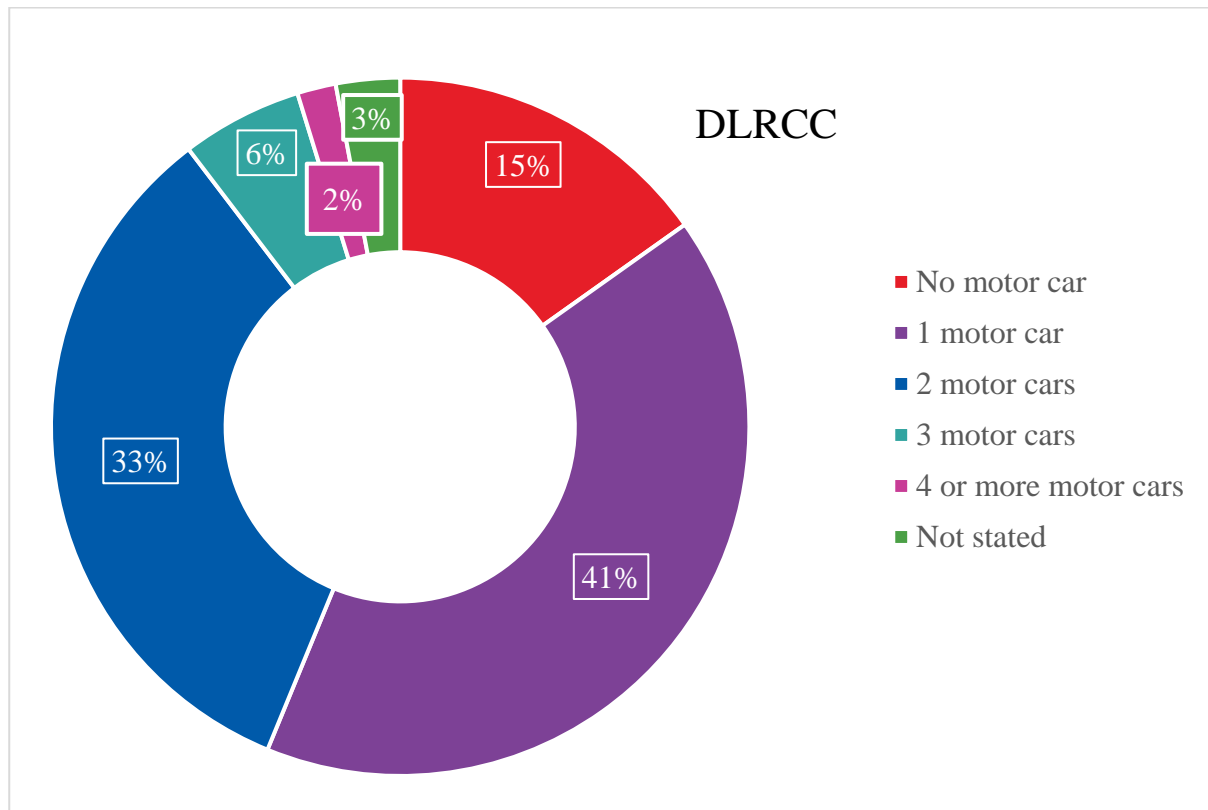


Figure 3-46 Car Ownership per household in DLRCC (Census 2016)

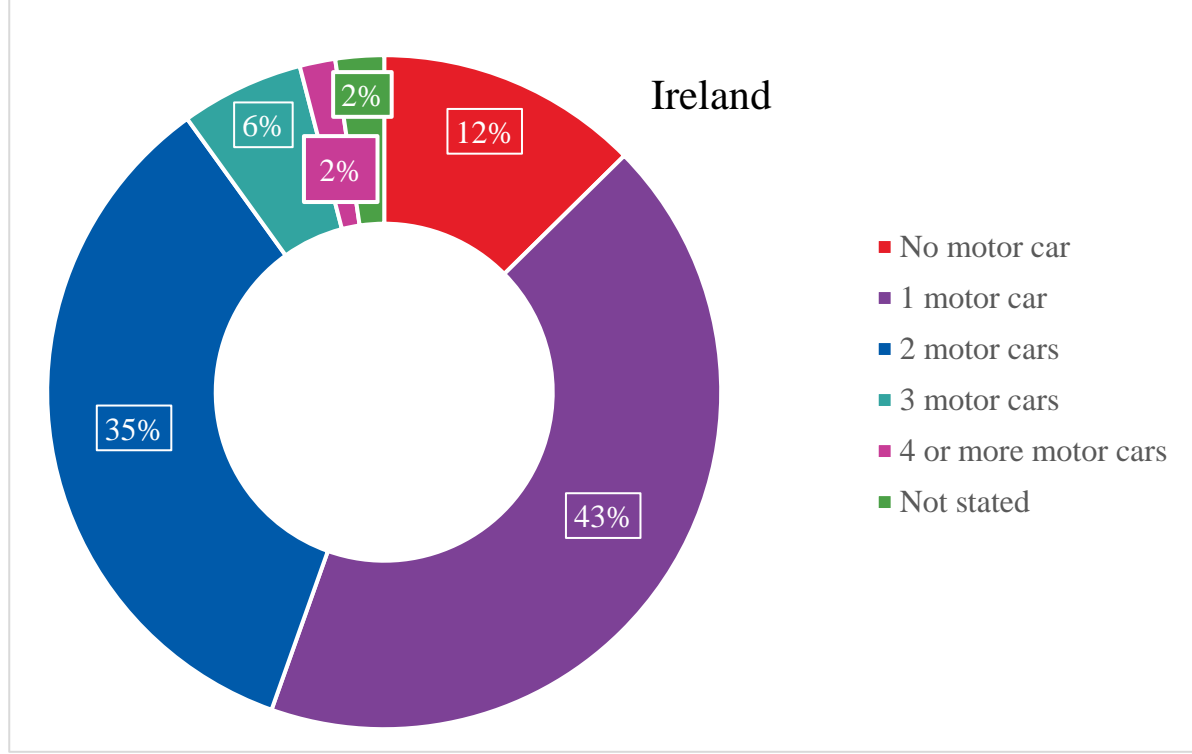


Figure 3-47 National Car Ownership per household (Census 2016)

3.5.7.4 Public Transport Accessibility Analysis

PTAL (Public Transport Accessibility Analysis) is a measure of connectivity by public transport. PTAL gives an overview of how well an area is connected by public transport. The score is a combination of the walk time to the transport stop (bus or tram stop, railway station) and the level of service at that stop. As well as walk time and frequency, the calculation also introduces the average wait time at a stop and a reliability factor which is different for rail and bus.

The scoring rating for PTAL is shown in Table 3-9.

Table 3-9: PTAL scoring index

PTAL
0 (worst)
1a
1b
2
3
4
5
6a
6b (best)

PTAL was used to assess transport connectivity in the LAP areas as shown in Figure 3-48.

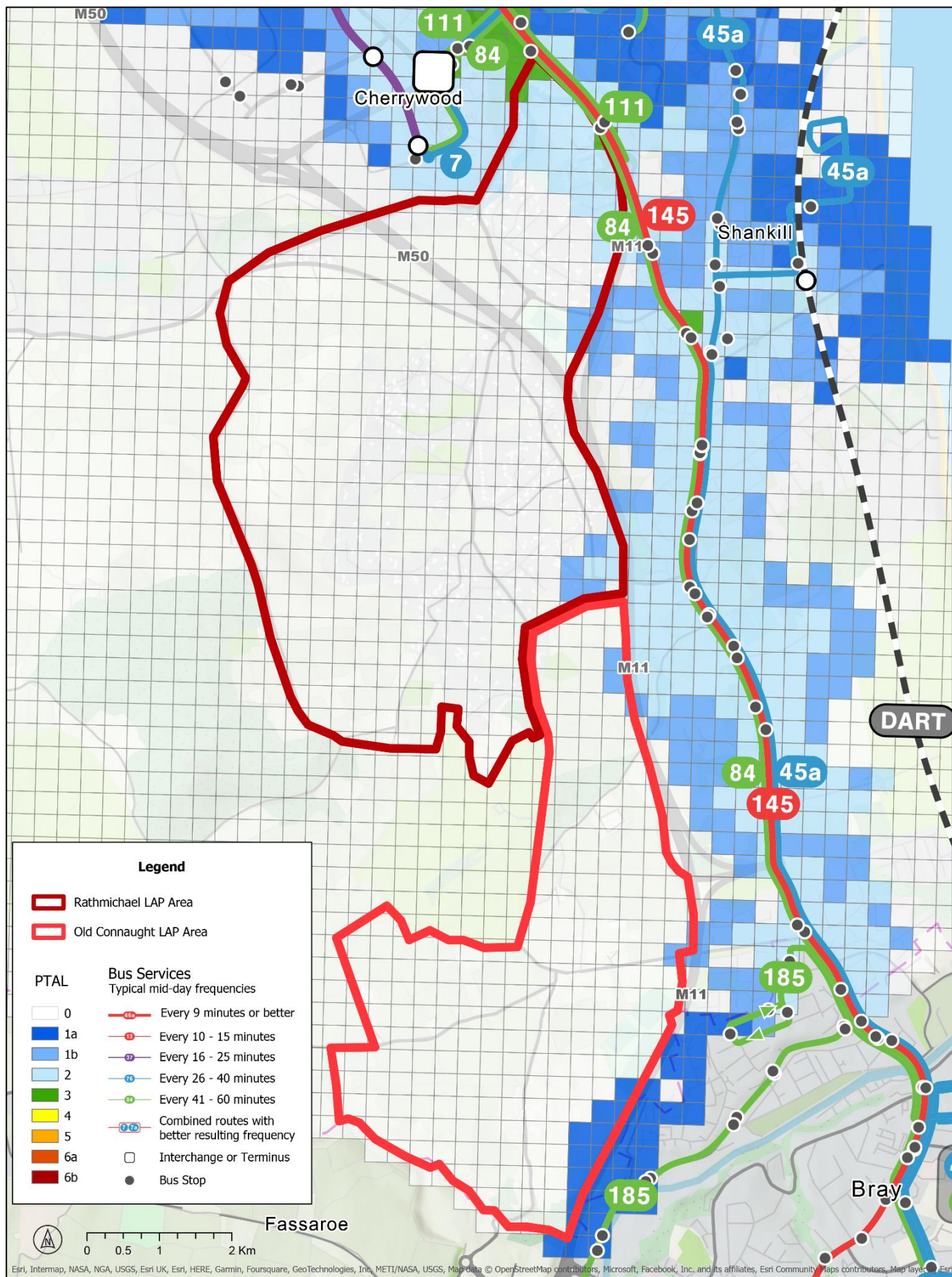


Figure 3-48 PTAL output for the two LAP areas

3.6 Water, Drainage, Flood Risk and Utilities

3.6.1 Water, Drainage and Surface Water

This section summarises, at a high level, the existing conditions, existing infrastructure present within the two LAP areas and likely changes to the infrastructure expected based on review of the latest development plans for the area.

Data on the existing potable water, wastewater, surface water and flooding were provided by Dún Laoghaire-Rathdown County Council (DLRCC) and Uisce Éireann (UÉ), the water and wastewater utility for Ireland. The data provided included Geographic Information System (GIS) data, reports, documents, and drawings. This data was supplemented with publicly available information.

The two LAP areas are depicted in Figure 3-49 with the topography (1m contours) and EPA waterbodies. The two LAP areas slope sharply from approximately 250m on the western boundary to 40m on the southeast boundary. Surface water flows towards Shanganagh Stream in the northern extents of the Rathmichael LAP area, Crinken Stream in the centre of the Rathmichael LAP area, and Dargle Stream to the south of the Old Connaught LAP area. The watercourses all flow easterly towards the sea. The two LAP areas are approximately 2km from the coastline.

Confirmation of Feasibility (CoF) letters filed in July of 2023 indicate water connections in the area are feasible with upgrades to account for additional flows in the network. However, there is no existing wastewater network, and these works would require funding by the developer to build a strategic pumping station to convey the foul network across the M11 to be joined with the existing network on the eastern side.

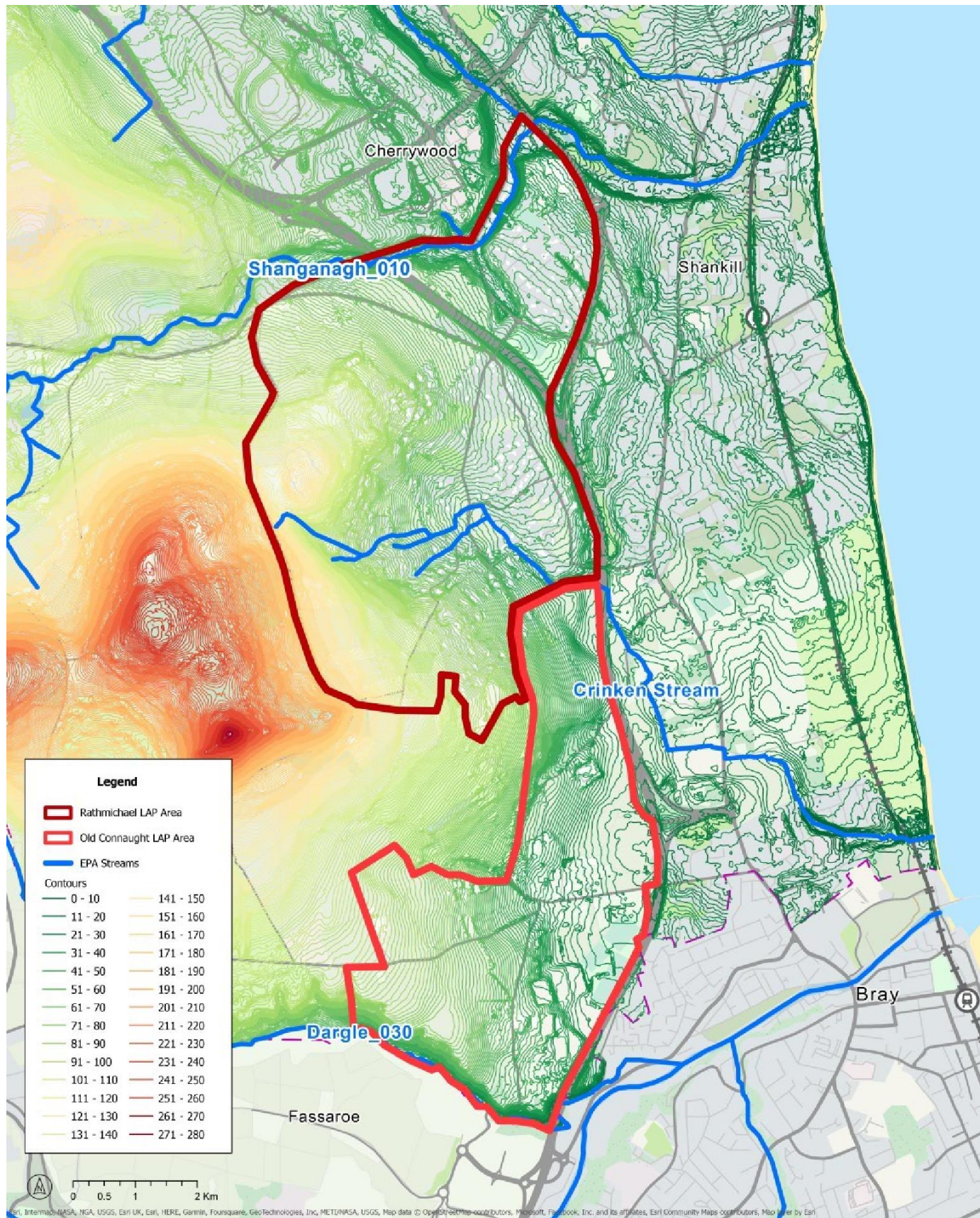


Figure 3-49 Topographic map of two LAP areas and waterbodies

3.6.1.1 Potable Water

The two LAP areas include lands which are connected to the existing UÉ potable water network. The two LAP areas are supplied from the Roundwood Water Treatment Works; however, construction is ongoing to deliver the Old Connaught-Woodbrook Water Supply Scheme by the end of 2024. The scheme includes connection to the existing Vartry Trunk Main at Ballyman. The scheme also involves the construction of two reservoirs at Ballyman (one low level reservoir which will supply a new high-level reservoir via a new pump station) and approximately 11km of trunk supply water mains to serve an area including Old Connaught and Rathmichael. In Rathmichael, extensive network reconfiguration will allow Rathmichael Reservoir to deliver potable water for the growing area. Planning permission for these works were granted in 2019 and are identified in the UÉ 2020-2024 Investment Plan.

Recent Confirmation of Feasibility (CoF) letters pertaining to two proposed residential developments state that water connections are feasible but may require upgrades to the system. Specifically, one of these would require an upgrade of the ~120mm CI main to a 200mm main to accommodate the proposed connection.

The Old Connaught Draft Local Area Plan Pre-Draft Consultation Issues Paper published in May 2023 states that there are existing water supply capacity shortcomings in the in the Old Connaught LAP area and its environs.

Old Connaught

The UÉ existing potable water network by Old Connaught is shown in Figure 3-50. Old Connaught is located within an identified pressure zone and new connections may require additional pressure control measures. The primary potable water trunk mains in the region area are a 600mm pipe running north-south along Ferndale Road which connects to Thornhill Road, a 450mm pipe along Allies River Road, and a 200mm pipe running along Old Connaught Avenue and crossing the M11.

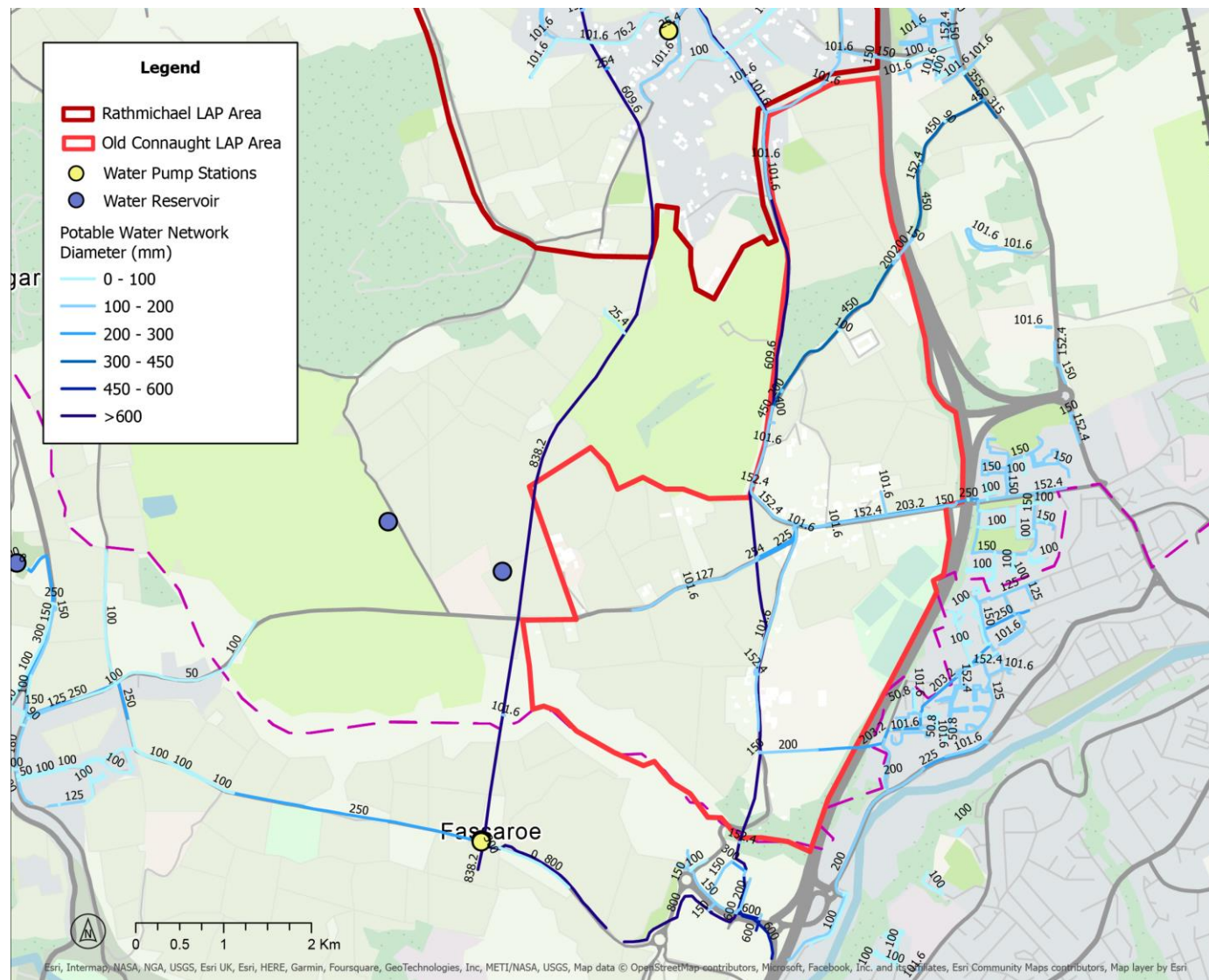


Figure 3-50 Existing Potable Water Network by Old Connaught

Rathmichael

The UÉ existing potable water network in Rathmichael is shown in Figure 3-51. Rathmichael is connected to the existing potable water network with most of the network operating by gravity. There is one pump station located at the intersection of Quarry Road and Ferndale Road and a reservoir located south of Rathmichael Road.

The trunk mains in the area include an 840mm trunk main which runs north-south approximately 600m east of Pucks Castle Lane and a 600mm trunk along Ferndale Road. There are five water connections crossing the M11, connecting Rathmichael to Shankill in the east.

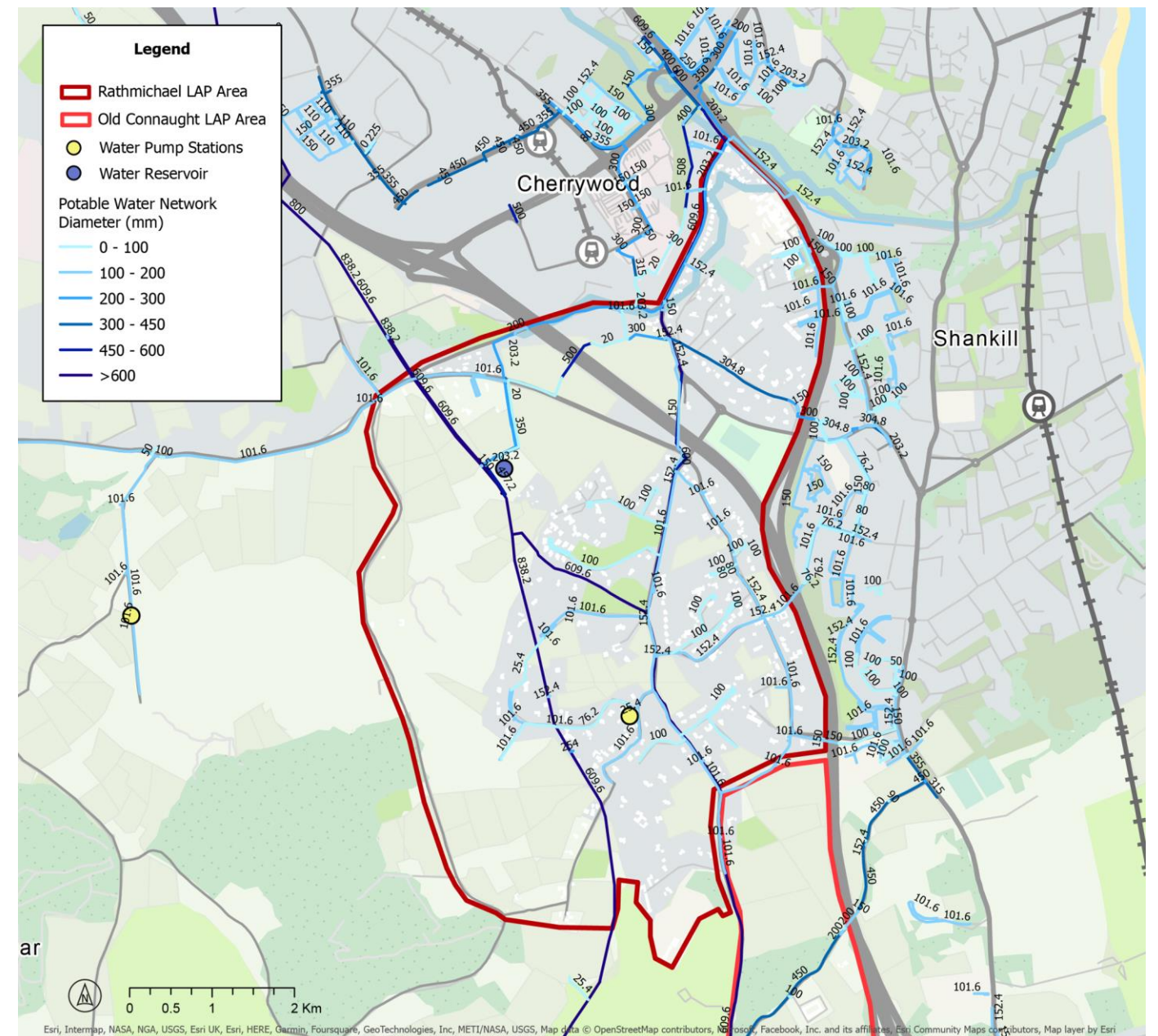


Figure 3-51 Existing Potable Water Network by Rathmichael

3.6.1.2 Wastewater

The Bray/Shanganagh Drainage Area Plan (DAP) is expected in Q3 2024, but conversations with UÉ indicate that all wastewater drainage from Old Connaught and Rathmichael should be conveyed to the Shanganagh Wastewater Treatment Plant (WWTP). The Shanganagh WWTP is operated by UÉ and is currently operating below its design capacity. As stated in Appendix 1 of the DLR County Development Plan 2022-2028, UÉ are investigating implementation of a Local Network Reinforcement Project in advance of the DAP finalisation. The reinforcement projects involve the upgrade of the 225mm wastewater main along Old Connaught Avenue to 375mm and a new 450mm wastewater main connecting to a 900mm river crossing to Bray Pump Station.

The existing wastewater network does not serve the two LAP areas, and existing residents own and maintain their own septic tanks. New developments must be linked to the UÉ wastewater network. This poses challenges for the two LAP areas due to the need to cross the M11 to connect to the existing wastewater network on the eastern side of the M11. UÉ is advancing the Old Connaught/Woodbrook Sewerage Scheme, which includes investigation of a wastewater pumping station which crosses the M11.

Old Connaught

The existing UÉ wastewater network within the vicinity of Old Connaught is shown in Figure 3-52. Old Connaught is currently not serviced by a UÉ wastewater network and will require connection to the wastewater network on the eastern side the M11.

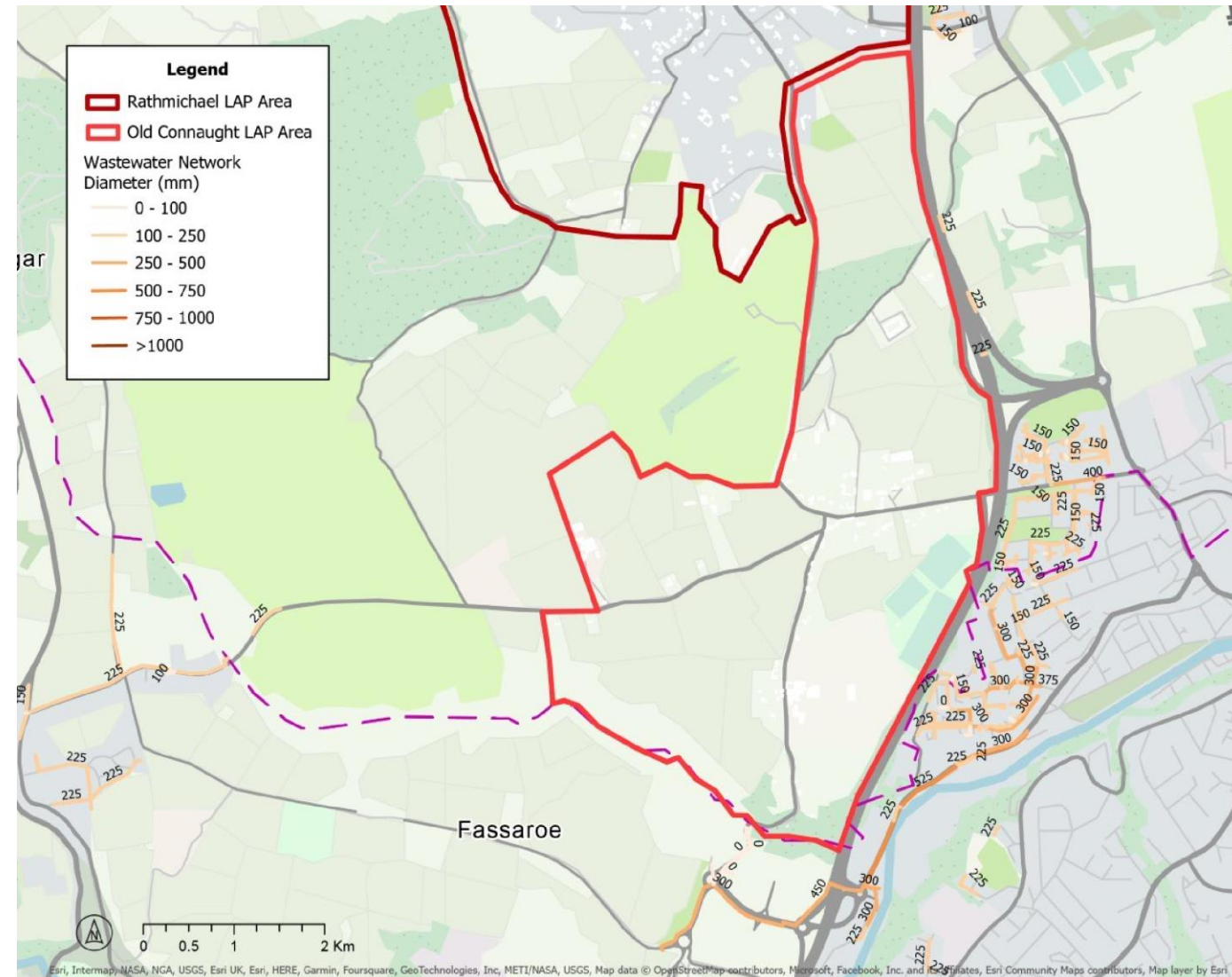


Figure 3-52 Existing Wastewater Network by Old Connaught

Rathmichael

The existing UÉ wastewater network within the vicinity of Rathmichael is shown in Figure 3-53. There is limited existing wastewater network with crossings of the N11 and M11 occurring just south of Cherrywood Road and at the N11/M11 interchange. A 375mm wastewater trunk main extends across the N11 along R116 but does not cross the M11. There is also a 225mm connection which crosses the M50 and connects several properties along Ballybride Manor and Lordello Road. An independent network connects several properties near Rathmichael Dales Road and a WWTP is depicted; a query has been raised with UÉ to confirm whether this independent network and WWTP is connected to the nearby UÉ wastewater network.

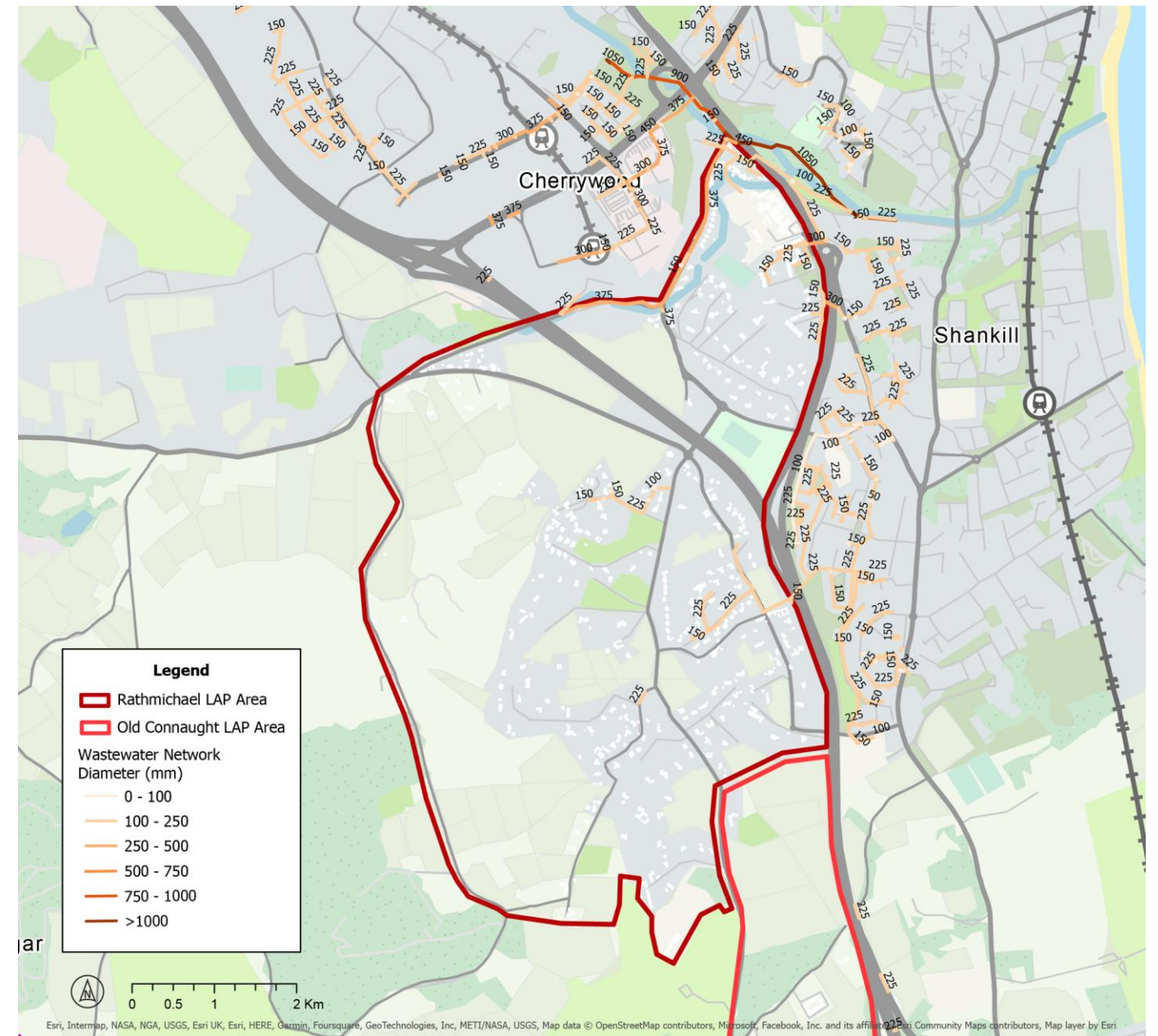


Figure 3-53 Existing Wastewater Network by Rathmichael

3.6.1.3 Surface Water

Several roads around Rathmichael and Old Connaught are already fitted with stormwater drainage networks and the two LAP areas contain stormwater network connections across the M11.

The Geological Survey Ireland (GSI) bedrock aquifer, gravel aquifer, and vulnerability GIS datasets were assessed as part of the hydrogeological desk study to support the surface water strategy and are presented in Figure 3-54 and Figure 3-55.

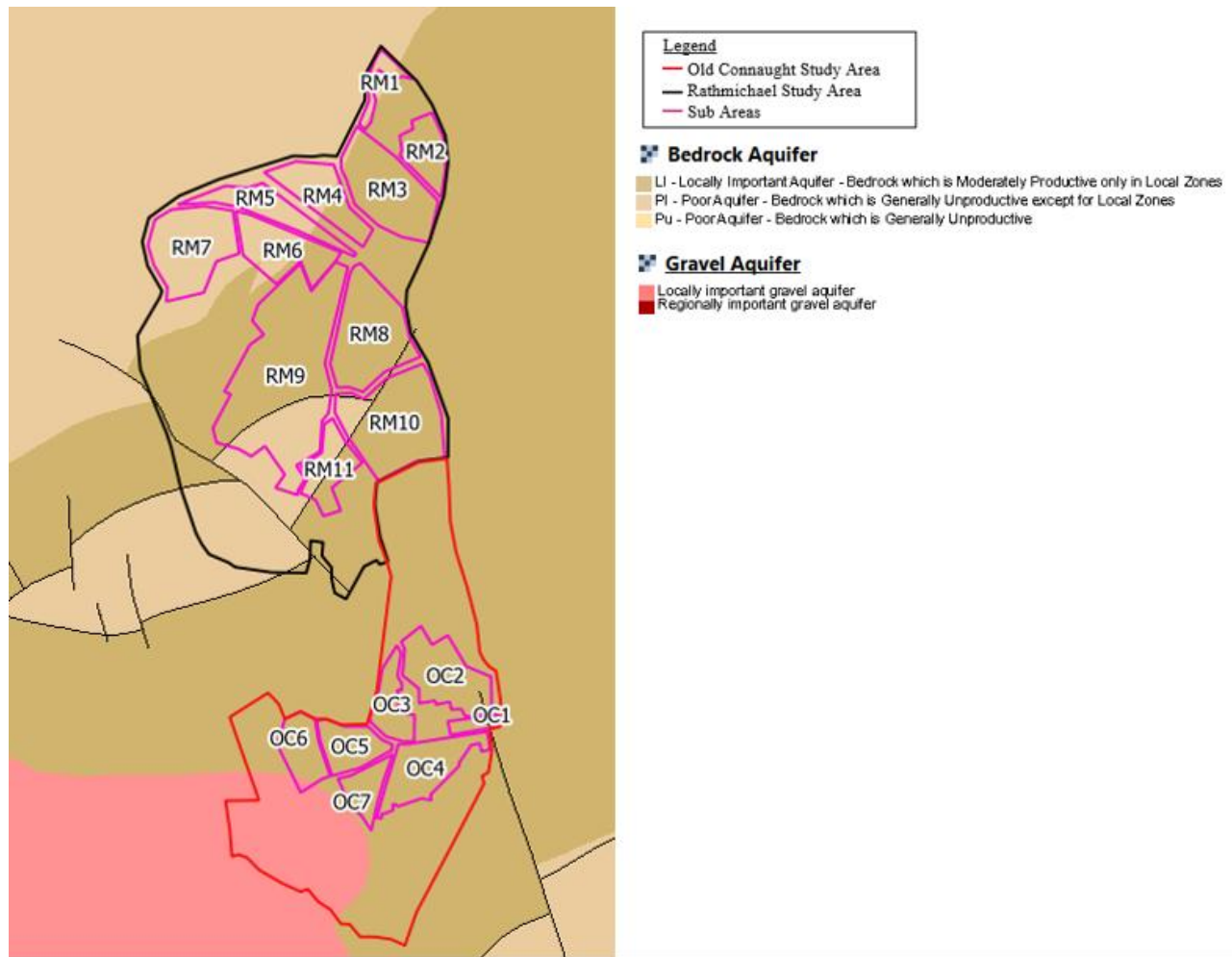


Figure 3-54 Groundwater Aquifers in Old Connaught and Rathmichael (Source: GSI)

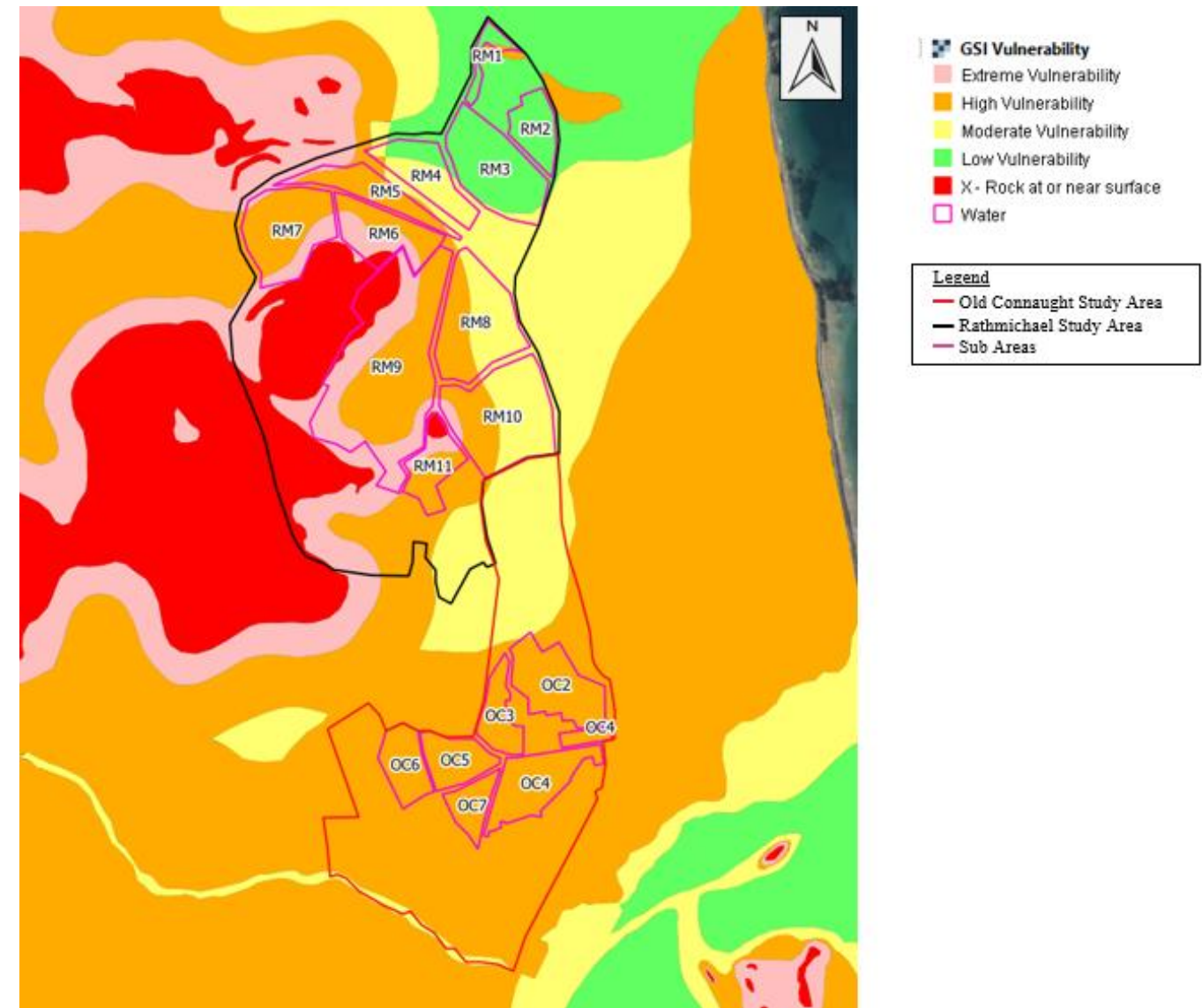


Figure 3-55 Groundwater Vulnerability in Old Connaught and Rathmichael (Source: GSI)

Old Connaught

Figure 3-56 shows the existing stormwater network in Old Connaught. The largest stormwater pipes crossing the M11 in Old Connaught are a 900mm main crossing just south of Allies River Road and a 1,350mm main crossing just south of the interchange. Additionally, there is a 450mm stormwater main crossing the M11 on Old Connaught Avenue and a 450mm crossing on Allies River Road.

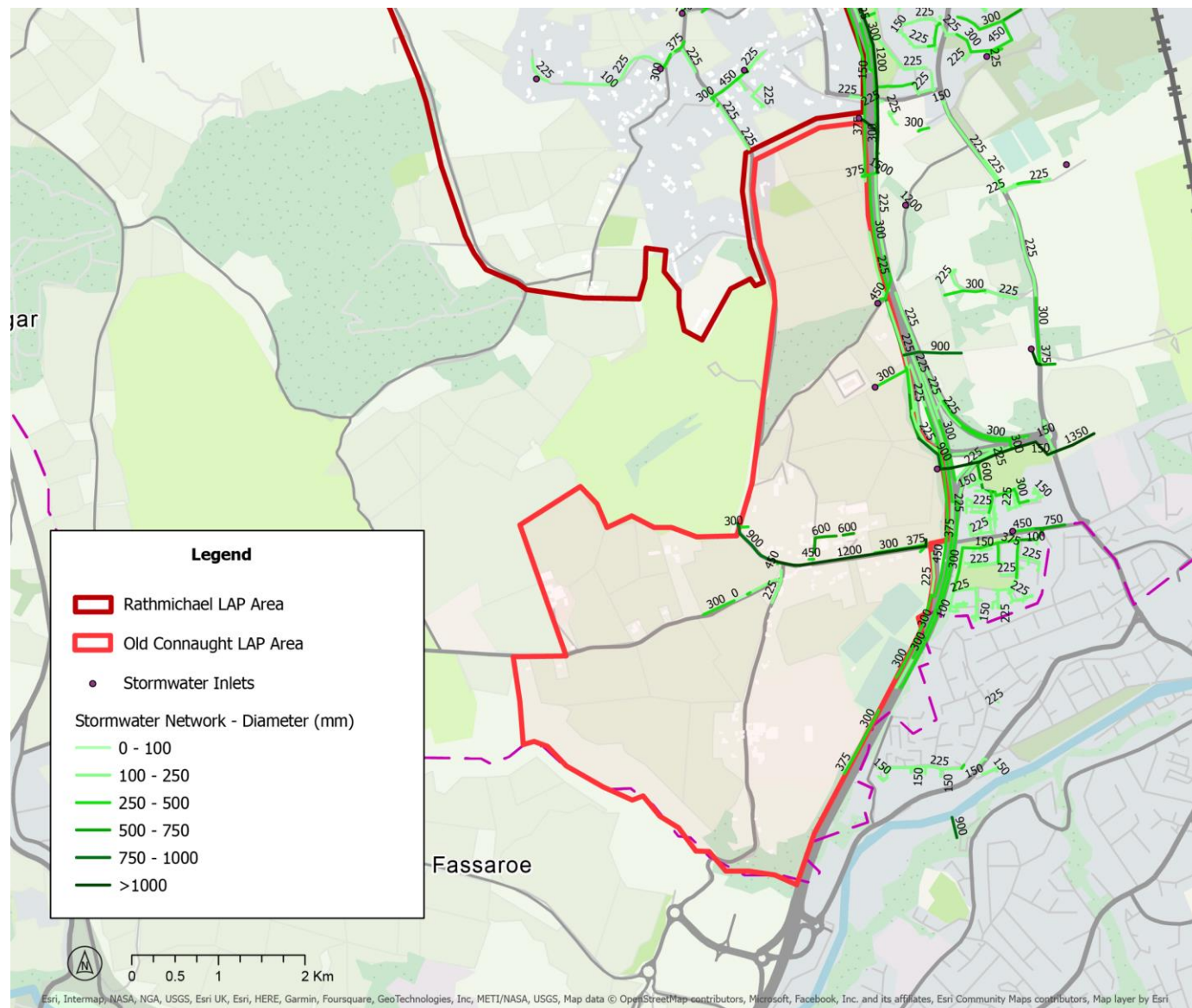


Figure 3-56 Existing Stormwater Network within vicinity of Old Connaught

The Old Connaught LAP area extends across areas underlain directly by locally important bedrock aquifer and, to the southwest, some areas where the bedrock aquifer is overlain by a locally important gravel aquifer as shown in Figure 3-54.

The Old Connaught LAP boundary also borders Ballyman Glen, a Special Area of Conservation (SAC No. 000713) as classified by the National Parks and Wildlife Service. The qualifying interest for the SAC includes *Petrifying springs with tufa formation (Cratoneurion) [7220]* and *Alkaline fens [7230]*, both of which are considered Groundwater Dependent Terrestrial Ecosystems (GWDTE).

The gravel aquifer depicted in Figure 3-54 represents the recharge area which replenishes the spring's water supply. Special consideration must be paid to any alterations of surface drainage water into Dargle Stream as these may impact the SAC and will require additional permitting permission. Deep excavations into the gravel aquifer which would penetrate the water table could also lead to a potential impact on the groundwater flow to the springs and should be avoided.

All sub-areas in Old Connaught LAP area are located in areas of high groundwater vulnerability (Figure 3-55) requiring precautions to be taken in the development of SuDS features which encourage the infiltration of surface runoff into the ground without contaminant removal. The wider study extents have some areas with medium groundwater vulnerability.

Rathmichael

Figure 3-57 shows the existing stormwater network in the Rathmichael LAP area. Rathmichael has a well-connected existing stormwater network. The stormwater trunk mains within the Rathmichael LAP area includes a 300mm pipe along Rathmichael Road and a 225mm pipe along Ferndale Road. There are several smaller networks connecting developments including a 100mm pipe on Old Rathmichael Road.

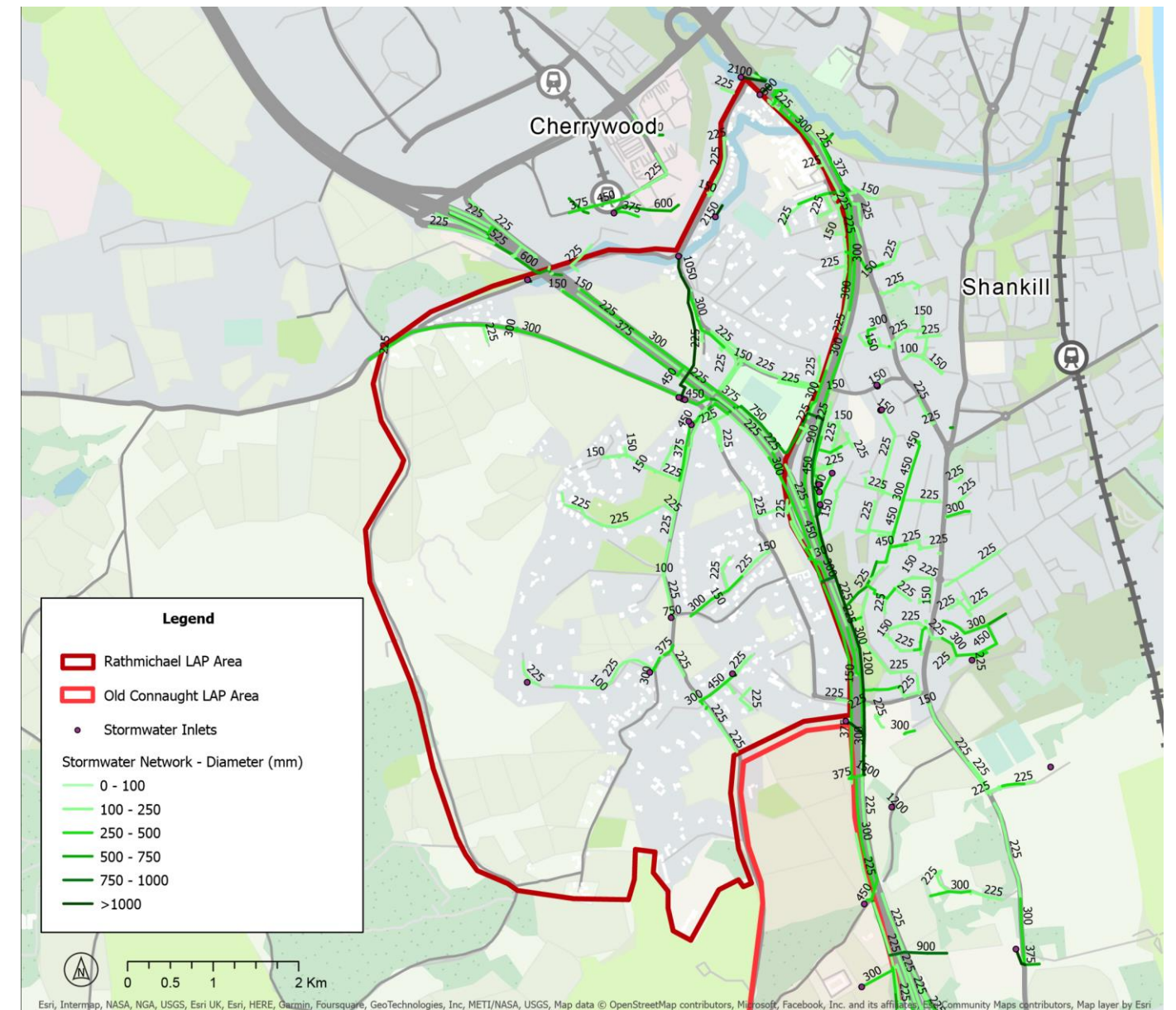


Figure 3-57 Existing Stormwater Network by Rathmichael

The Rathmichael LAP area contains locally important and poor bedrock aquifers (Figure 3-54). Areas designated as poor aquifers indicate low resource potential for water abstractions. Several bedrock fault lines also intersect the Rathmichael LAP area.

The Rathmichael LAP area contains several areas where bedrock is at or near the surface and groundwater is designated as extremely or highly vulnerable, as shown in Figure 3-55. This designation requires special precaution in relation to SuDS features encouraging infiltration of surface water which may carry contaminants from roadways and residential spaces into aquifers. Areas with low or moderate vulnerability are suitable for infiltration or SuDS features. Additionally, groundwater vulnerability requires additional precautions be taken to eliminate impacts on groundwater and watercourses in the surrounding area and encourages the connection of new and existing developments, where possible, to municipal systems.

3.6.2 Flooding

During the preparation of the Dún Laoghaire-Rathdown County Development Plan, a Strategic Flood Risk Assessment (SFRA) was carried out by JBA Consulting to incorporate flood risk management within the planning process. This included the application of Justification Tests for the two Local Area Plans prepared for Rathmichael and Old Connaught. The Justification Tests were based off previous Office of Public Works (OPW) Catchment Flood Risk Assessment and Management (CFRAM) flood maps. The current CFRAM maps are under review at some locations within the two LAP areas. Flood extents in areas which are under review should be taken only as a reference, as present flood risks may differ. The definition of flood risk zones defined by the Planning Guidelines are depicted in Table 3-10.

Table 3-10 Definition of flood risk zones

Zone Category	Description
Flood Zone A	Probability of flooding from rivers and the sea is highest (greater than the 1 in 100-year return period for river flooding or the 1 in 200-year return period for coastal flooding).
Flood Zone B	Probability of flooding from rivers and the sea is moderate (between the 1 in 100-year and 1 in 1,000-year return periods for river flooding and between the 1 in 200-year and 1 in 1,000-year return periods for coastal flooding).
Flood Zone C	Probability of flooding from rivers and the sea is low (less than the 1,000-year return period for both river and coastal flooding). Flood Zone C covers all areas which are not in zones A or B.

The two LAP areas contain areas designated as Flood Zone A and B, defined by the Planning Guidelines, as areas of high probability and moderate probability of flooding, respectively. Flooding in the two LAP areas is fluvially dominant. CFRAM flood map E10LOU_EXFCD_F1_06 indicates no tidally influenced flooding occurs upstream in the Shanganagh_010 stream. Therefore, no coastal flooding occurs in Rathmichael. The Old Connaught LAP area does not lie within coastal flood extents according to previous CFRAM maps. Several CFRAM maps within the boundary of the Old Connaught LAP area are currently under review. A site-specific hydraulic modelling assessment should be undertaken to confirm the site is not at risk of coastal flooding. . Neither area is impacted by historical groundwater flooding.

Old Connaught

The Old Connaught LAP area includes lands within Flood Zones A and B from Dargle_040 Stream in the north and centre of the Old Connaught. Some of the flood extents are depicted within existing developments. The CFRAM maps, which are under review, are depicted in Figure 3-58.

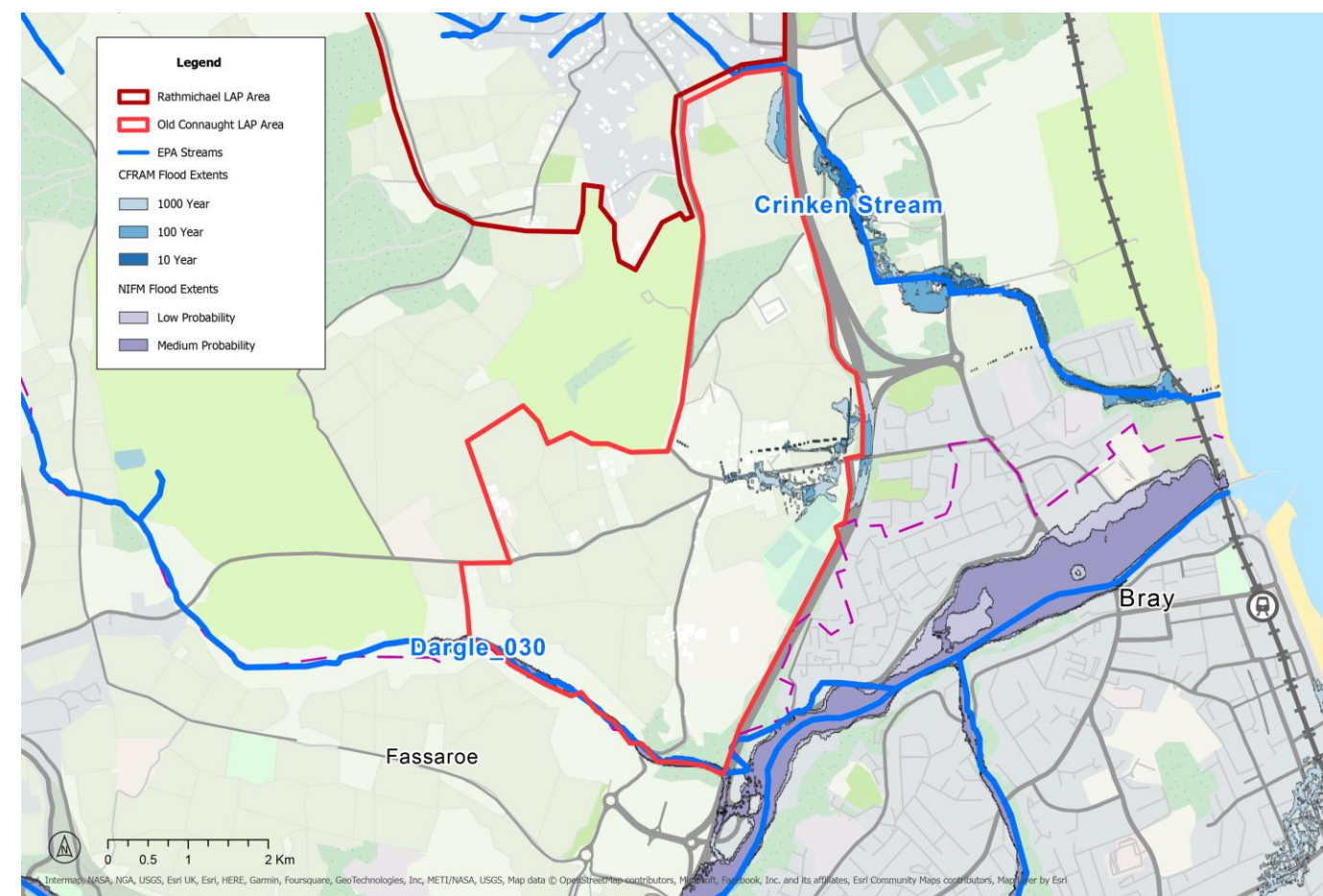


Figure 3-58 CFRAM Flood Extents by Old Connaught (Dargle 04 Flood Extents are Under Review)

Some of these sections are included in the boundaries considered for Objective A1, “to provide for new residential communities and Sustainable Neighbourhood Infrastructure in accordance with approved local area plans”. These areas have mostly already been developed. Additionally, there are lands identified south of the Old Connaught LAP area at County Brook and to the northeast area of the Dargle_040 Stream which are designated under Objective GB, “to protect and enhance the open nature of lands between urban areas”.

Areas inside of Flood Zones A and B should not be developed with major infrastructure as they do not pass the Justification Test and should be redesignated as open space/amenity/water compatible uses. These areas represent a small portion of the Old Connaught development and most of the lands are located in Flood Zone C, and therefore do not require a Justification Test.

Rathmichael

The Justification Test completed for the Rathmichael LAP area indicated the area is a key location for sustainable growth for the Dublin Metropolitan Area, according to the settlement hierarchy for the Region. The Rathmichael LAP area contains lands which are classified as Flood Zones A and B from Shanganagh Stream and the Carrickmines Stream tributary in the north. The Dargle_040 Stream flood extents neighbour the LAP boundary in the south. Some of the flood extents are depicted within existing developments. The CFRAM maps, of which the Dargle_040 flood extents are under review, are depicted in Figure 3-59.

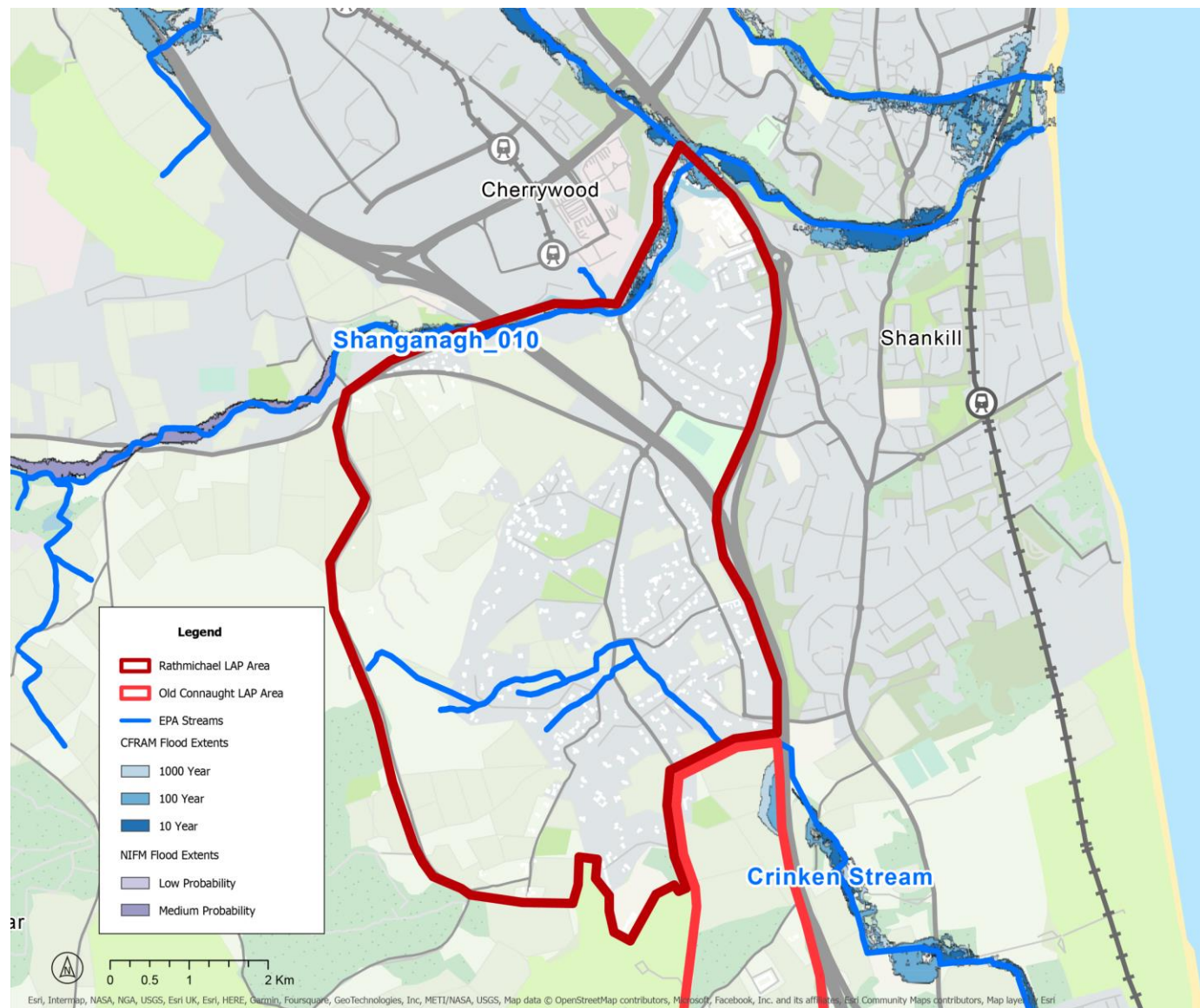


Figure 3-59 CFRAM Flood Extents by Rathmichael (Dargle 04 Flood Extents are Under Review)

Areas inside of Flood Zones A and B should not be developed with major infrastructure as they do not pass the Justification Test and should be redesignated as open space/amenity/water compatible uses. These areas represent a small portion of the Rathmichael development and most of the lands are located in Flood Zone C, and therefore do not require a Justification Test.

3.6.3 Power

The two LAP areas have the potential to be serviced from three separate zone substations (Carrickmines 220kV Zone Substation, Cherrywood 110 kV substation & Fassaroe 110kV Substations). Overhead 110kV HV lines transverse across the southeastern boundary of the Old Connaught LAP area, as in Figure 3-60.

From a review of local utility maps, there appears to be MV underground and overhead lines within close proximity to the two LAP areas. There are 38kV & 20kV MV overhead and underground lines which transverse within the two LAP areas. Feeder cables could be requested from the eastern & western side of the two LAP areas. There should be potential to request new 11 kV feeders from the utility provider to service the new site requirements via underground or overground MV connections.

The ESB has indicated that there is potential for capacity upgrade requirements should a large residential development be established within the two LAP's. A new 38 kV substation would be required within the LAP's to allow for the capacity requirements associated with new residential demand.

An application for new connection would need to be submitted to the local utility. New MV substations and low voltage feeder pillars would need to be located within the two LAP areas.

The Dublin Array preferred cable route indicates the proposed route for the array cables to the Carrickmines Zone Substation would likely run to the north of the proposed site boundaries. As such, it should not impact directly on the Rathmichael LAP area to the north of the boundary.

3.6.4 Telecoms

The two LAP boundaries have the potential to connect to fibre networks within the local area. EIR have main fibre routes to the north of the site boundary connecting to their exchange within Shankill. Fibre cabinets have also been installed within the Rathmichael boundary. There are a number of existing residential sites within the Rathmichael and Old Connaught boundaries. Application for new connections will need to be submitted to allow for future new connections.

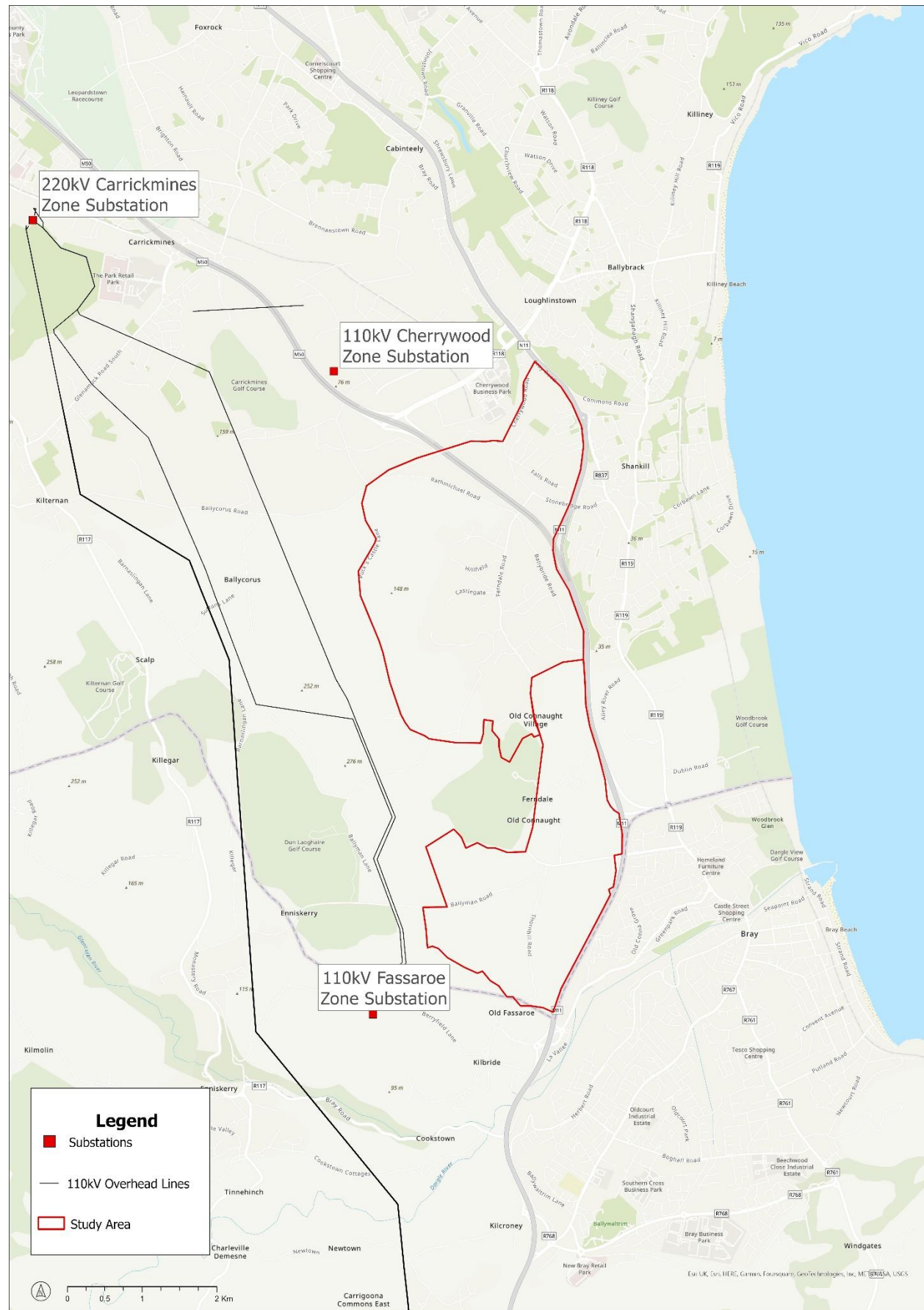


Figure 3-60 Existing substations

3.6.5 Water, Drainage, Flood Risk and Utilities - Constraints and Opportunities

Constraints:

- No existing wastewater network in either LAP areas. Proposed wastewater network must flow towards Shanganagh WWTP which requires the wastewater main to cross the M11.
- Rathmichael is listed as a site of extreme or high groundwater vulnerability. New wastewater networks must be sensitive to this issue.
- Development is limited by capacity to complete the Old Connaught-Woodbrook Water Supply Scheme which will allow for sustainable provision of water and new connections as new developments in the area increase.
- Applications required for new utility connections.
- Crossing the M11 for water, wastewater, and drainage crossings will require coordination with TII and UÉ.
- The SAC area in Old Connaught is a protected area with limitations on development.
- GSI identified areas with extremely or highly vulnerability require special precaution in relation to SuDS features encouraging infiltration of surface water which may carry contaminants from roadways and residential spaces into aquifers.
- ESB capacity upgrades would be required within the LAP's, it is likely a new 38kV substation would need to be established to provide capacity to the new residential development.

Opportunities:

- Deliver a new wastewater network scheme and allow existing owners to connect to the wastewater network. Reduce the use of individual treatment facilities and septic tanks.
- Deliver sustainable water connections in the two LAP areas, to serve new and existing housing developments.
- Implementation of green water infrastructure and nature-based solutions in place of extending stormwater networks. Provide increased protection for existing streams from flash flooding and surface water runoff pollutants as impervious surfaces increase.
- Connect existing and new developments to the new wastewater system to reduce septic tank use in the region and remove potential groundwater risks.
- GSI identified areas with low or moderate vulnerability are suitable for infiltration or SuDS features.
- Close proximity to existing substations in Carrickmines, Cherrywood and Fassaroe.

4. Summary

Table 4-1 below summarises the constraints and opportunities identified throughout the document in each discipline.

4.1 All Disciplines - Constraints and Opportunities

Table 4-1 Summary of Constraints and Opportunities for Old Connaught and Rathmichael

Discipline	Constraints	Opportunities
Land Use	<ul style="list-style-type: none"> Existing lands are developed at low density in a largely unplanned manner and does not support compact growth. Limited current employment opportunities within the LAP areas. 	<ul style="list-style-type: none"> The LAP area is in close proximity to high employment zones in Bray and Cherrywood. Existing social infrastructure and facilities in immediate area.
Housing	<ul style="list-style-type: none"> Limited services and amenities in the LAP areas. Location of the sites inhibits connectivity to the wider area in Shankill (for the sites in Rathmichael) and in Bray (for the sites in Old Connaught). Lack of access to sufficient public transport for travelling to employment – the Luas terminates at Cherrywood and the DART is over 1km away. 	<ul style="list-style-type: none"> Development at these sites would be supported by the two LAPs, furthering the amount of housing in the County. Planned employment expansion in Cherrywood, Fassaroe, and Bray means there will be employment and services withing proximity to the DLR housing sites. Planned public transport and active travel improvements including the Woodbrook DART Station, Luas to Bray, and BusConnects Bray-City Centre would improve access to services and employment from these sites.
Environmental	<ul style="list-style-type: none"> Potential impacts on recreational use and public amenities that benefit the local population within the two LAP areas. Potential impacts on recorded monuments identified within the two LAP areas. Potential impacts on structures or group of structures of architectural heritage significance with statutory protection have been identified within the boundary of the two LAP areas. Potential impacts on the Ballyman Glen SAC (Site code 000713), the Ballyman Glen pNHA (Site code 000713) and the Loughlinstown Wood pNHA (Site code 001211). Potential for impacts on hedgerows, mature trees and woodlands in the two LAP areas as a result of proposed development. The potential air quality impacts which might be caused by the future development of the two LAP areas will need to be considered. Noise sensitive receptors are located within and surrounding the two LAP areas to the east and north and sparsely located to the south and west. Impacts on noise sensitive receptors (as a result of the development of the two LAP areas and the impact of existing noise sources (e.g., traffic noise from the M50/N11 should inform the land use strategy brought forward as part of this study. 	<ul style="list-style-type: none"> Opportunities should be considered to incorporate archaeological or architectural heritage features appropriately into the proposed development, where practicable. Regard should be had to the relevant policy objectives contained in Chapter 11 (Heritage and Conservation) of the DLRCC County Development Plan 2022-2028. Chapter 11 of the Plan includes specific objectives and guidance relating to the protection of the County’s heritage under the headings of archaeological heritage, architectural heritage and countywide heritage (which includes the DLR Heritage Plan), and important overarching themes which require specific, additional consideration. Opportunities should be considered to avoid and minimise ecological impacts, including the loss of habitat. For example, where practicable hedgerows should be retained. Regard should be had to the relevant policy objectives contained in Chapter 8 (Green Infrastructure and Biodiversity) of the DLRCC County Development Plan 2022-2028. Chapter 8 of the Plan includes policies for the protection, creation, and management of this resource in an integrated manner by focusing on key themes within GI such as: landscape and the coast; access; biodiversity; and parks. In addition, the integration of the emerging Ecosystem Services Approach (ESA), will be promoted and encouraged. ESA is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. This will also be included in the forthcoming Biodiversity Plan for the County. Where practicable, avoid and minimise impacts on waterbodies within the two LAP areas and to incorporate them into the future developments.
Parks & Open Spaces, Heritage & Conservation, Green Infrastructure & Biodiversity, and Landscape	<ul style="list-style-type: none"> Minimal access to public open spaces or council managed parks. No playgrounds (acting as destinations, providing amenity for a specific age types) located within the two LAP areas. Access to public open spaces with facilities to the east are bisected by major road infrastructure. Private or restricted public access to open spaces (private golf clubs, school grounds) Potential high visual impact of any development due to loss of established hedgerows/trees Number of protected views and areas of elevated topography. Existing residential land/property ownership and their associated boundaries and interfaces consist of established, mature vegetation. Any proposed development of desired pedestrian, vehicular, active travel, road and/or general improved infrastructure works may have potential impacts on established habitats 	<ul style="list-style-type: none"> Celebrate natural and cultural heritage values in the area through considered design. Harness and reinforce the landscape character. Provide for the provision of new, high quality public open spaces providing a range of both passive and active amenity. Provide for and enhance ecological connections within the two study areas and beyond. Enhance connectivity and accessibility to key destinations. Connect to surrounding public spaces, local attractions and expand provision where possible. Maintain and protect ecological connectivity across the landscape. Capture and frame key views to surrounding natural landmarks. Use agricultural land to create multifunctional green connections to areas of interest providing connectivity, delivering SuDS, biodiversity, and public open spaces. Creation of constructed wetlands in flood risk areas to provide nature-based solutions, amenity and ecological diversity.
Transport	<ul style="list-style-type: none"> Lack of footpaths within the two LAP areas due to rural nature of the current settlements; Lack of safe crossings at junctions within the two LAP areas; Allies river is a barrier to permeability; Hilly topography; Lack of pedestrian connections to high-quality public transport corridors; Limited, if any, viable walking connections to existing education sites; M11/N11 and M50 act as barriers to permeability. No formal cycle network in the two LAP areas; 	<ul style="list-style-type: none"> A largely ‘blank canvas’ in potential development areas offers the opportunity to prioritise active modes for residents; Potential to re-establish pedestrian connection along Allies River Road across the M11, which is noted in the DLRCC Development Plan 2022 – 2028; Potential to provide footpaths along key roads within the two LAP areas to encourage walking for short journeys, particularly with the potential introduction of increased non-residential uses to serve residents within the two LAP areas; Opportunity to establish pedestrian connections to high quality public transport corridors such as Brides Glen Luas station; Opportunity to improve established walking trails through the two LAP areas including the Dublin Mountains Way; Support trips to school by foot (and bicycle) through both infrastructural and softer measures;

Discipline	Constraints	Opportunities
	<ul style="list-style-type: none"> • Lack of permeability connections; • Lack of wayfinding and legibility; • Lack of cycle connections to key destinations (i.e. schools, town centres of Bray, Cherrywood and Shankill, train station at Shankill and Bray, Luas stop at Brides Glen); • Limited cycling facilities in the two LAP areas. • No bus services serve the two LAP areas; • No DART or Luas connection through the two LAP areas; • Existing connections to DART and Luas are lengthy and circuitous. • Motorway network as physical barrier; • No direct connections from two LAP areas onto the M11 or M50 • Adequacy of existing local road network to facilitate residential development at scale; • High level of existing car dependency and ownership within the two LAP areas; • Rural nature of existing roads; • Most trips to work and school or college are made by car (dominant mode of transport with 68% mode share); 	<ul style="list-style-type: none"> • Opportunity to improve cyclist and pedestrian safety for existing and future residents; • New links and connections would make walking an attractive option. Pedestrian paths could be provided through new development areas and green spaces and could connect through residential areas; • New links and connections would make cycling an attractive option (e.g. from local schools/employment zones to residential areas); • Take advantage of nearby development areas to improve active travel permeability to Cherrywood in the north, Fassaroe in the south, and Woodbrook to the east (relating to SLO 150); • Opportunity to develop greenways and/or off-street cycle facilities to encourage use by all ages, genders and abilities for multiple uses; • Establish cycling routes to Strategic Employment Locations at Cherrywood, Carrickmines and the Key Town of Bray; • Encourage the use of electric bikes to make cycling easier on hilly topography in the two LAP areas; • Investigate potential cycle linkages with recreational amenities and sporting facilities including Stonebridge Road, Shanganagh Park and Ticknick Park; • Provide pedestrian/cycle access across the M11 corridor in the vicinity of Allies River Road (in accordance with SLO 108) and at Love Lane Bridge; • Investigate potential for bus routes to serve the two LAP areas; • Access potential for bus services to connects to the high-quality bus and rail corridors east of the N11; • Investigate potential to provide Luas connection through or within close proximity to the two LAP areas. • Provide active travel connection to Bus stops along Dublin Road and Luas stop at Brides Glen; • Provide active travel connections to proposed station at Woodbrook. • Connection to Fassaroe would enhance connectivity to the south; • Enhance the safety of the existing road network; • Potential connection to M50 and Cherrywood via new western connection to M50 Junction 16. • Potential to reduce car dependency with improvements to active travel network; • Support non-car modes of travel to school; • Trip destination for work and schools indicate that some car trips can be replaced by active travel and/or enhanced public transport; • Post-COVID working patterns such as working from home and remote working hubs.
Water, Drainage, Flood Risk and Utilities	<ul style="list-style-type: none"> • No existing wastewater network in either LAP areas. Proposed wastewater network must flow towards Shankill WWTP which requires the wastewater main to cross the M11. • Rathmichael is listed as a site of extreme or high groundwater vulnerability. New wastewater networks must be sensitive to this issue. • Development is limited by capacity to complete the Old Connaught-Woodbrook Water Supply Scheme which will allow for sustainable provision of water and new connections as new developments in the area increase. • Applications required for new utility connections. • Crossing the M11 for water, wastewater, and drainage crossings will require coordination with TII and UÉ. • The SAC area in Old Connaught is a protected area with limitations on development. • GSI identified areas with extremely or highly vulnerability require special precaution in relation to SuDS features encouraging infiltration of surface water which may carry contaminants from roadways and residential spaces into aquifers. 	<ul style="list-style-type: none"> • Deliver a new wastewater network scheme and allow existing owners to connect to the wastewater network. Reduce the use of individual treatment facilities and septic tanks. • Deliver sustainable water connections in the two LAP areas, to serve new and existing housing developments. • Implementation of green water infrastructure and nature-based solutions in place of extending stormwater networks. Provide increased protection for existing streams from flash flooding and surface water runoff pollutants as impervious surfaces increase. • Connect existing and new developments to the new wastewater system to reduce septic tank use in the region and remove potential groundwater risks. • GSI identified areas with low or moderate vulnerability are suitable for infiltration or SuDS features. • Close proximity to existing substations in Carrickmines, Cherrywood and Fassaroe.

4.2 Strengths, Weaknesses, Opportunities and Threats

The findings of the baseline analysis, the following strengths, weaknesses, opportunities and threats were found for Old Connaught and Rathmichael have been summarised in Table 4-2. A more detailed SWOT analysis will be included in Part 2 – Positions Report to factor in the localised strengths, challenges, opportunities and threats that apply the two LAP areas.

Table 4-2 SWOT analysis for Old Connaught and Rathmichael LAP areas

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Close proximity to existing services and facilities in Bray, Shankill and Cherrywood. • Close proximity to power sub-stations in Fassaroe, Cherrywood and Carrickmines. • Close proximity to existing major Road infrastructure (i.e. M50, M11/N11, Dublin Road). • Close proximity to current Luas Green Line terminus at Brides Glen. • Close proximity to existing bus services in • DLRCC owned lands in the north of Rathmichael. • Existing pedestrian connection to Shankill across M11. • Rathmichael Wood amenity directly adjacent to the Rathmichael LAP area. • DLRCC owned lands at closest point to Bray. 	<ul style="list-style-type: none"> • Limited current employment opportunities in the two LAP areas. • Limited social infrastructure. • No existing local centre to provide the needs of the two LAP areas. • M50, M11 and M11 is a physical barrier. • Minimal east-west transport connections over the M50 and M11. • High car ownership and car dependency for commuting. • Limited direct bus services and connectivity. • Narrow road carriageways (some with hedgerows) to allow for active travel opportunities on existing road network. • Topography of study area presents active travel challenges. • Limited cycle network within Rathmichael and surrounding areas. • Lack of existing wastewater network. • Challenging for most (if not all) utilities to cross the M11. • Rathmichael is listed as an area of extreme/high groundwater vulnerability. 	<ul style="list-style-type: none"> • Integration of land use and transport. • Integration of transport, green infrastructure and SuDS. • Create a strong connection of infrastructure between Old Connaught and Rathmichael. • Provide strong infrastructure connections to future developments in Cherrywood, Fassaroe, Woodbrook / Shanganagh. • Provide strong infrastructure connections to future growth in Bray. • To improve pedestrian safety for existing and future residents. • Provide active travel connections to existing Luas station at Brides Glen. • Improve established walking trails through the Rathmichael area. • To improve connections to existing areas in Rathmichael, e.g., Rathmichael Woods. • Align future infrastructure required for Old Connaught to the natural and cultural heritage values of the area. • Create a sustainable transport network that connects within both LAP areas and beyond to potentially reduce car dependency. • Link the future public transport, walking and cycling facilities in Old Connaught to proposed N11/M11 Bus Priority Interim Study, BusConnects and DART station at Woodbrook. • Encourage the use of electric bikes due to hilly topography. • Avoid and minimise ecological impacts with no net loss. • Encourage the protection of established and mature vegetation when planning for future developments in the Old Connaught LAP area. • Consideration of nature-based solutions when planning for infrastructure schemes. • Develop a layer of both new and upgraded transport infrastructure to facilitate ease of movement to and from the developing communities. • New wastewater networks to consider Rathmichael being an area of extreme/high groundwater vulnerability. • Reduce the use of individual treatment facilities and septic tanks by allowing existing and new owners to connect to the future wastewater network. • Deliver sustainable water connections in the area to allow for new housing developments. • Deliver a utilities network that will suit the needs of existing and future developments in both LAP areas. 	<ul style="list-style-type: none"> • Concerns from residents to potential infrastructure locations. • Insufficient co-ordination of land-use and transport plans. • Further construction of low-density, single use dwellings. • Lack of buy-in to deliver the necessary infrastructure required for the two LAPs. • Lack of funding.

Appendix A

Long List Policy Review

Dún Laoghaire Rathdown County Council

Old Connaught & Rathmichael ICAS

Part 1 - Baseline Report

Reference:

Draft 3 | 1 September 2023

RAFT



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 295742-00

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A.1 Policy Review

A.1.1 Introduction

This section shows the key findings from an examination of pertinent policies relating to the two LAP areas, considering national, regional, and local plans. The focus was twofold: First on assessing the alignment between the development and plans at different levels, and then on identifying additional measures and developments that are taking place in parallel with the development in Old Connaught and Rathmichael to support the objectives of these plans.

A.1.2 National Policy

A.1.2.1 Project Ireland 2040: National Planning Framework and National Development Plan

Project Ireland 2040 – National Planning Framework (NPF) provides a high-level strategic planning framework to guide development and investment over the coming decades, with the Project Ireland 2040 - National Development Plan (NDP) 2021-2030 setting out investment priorities. Growth of the Eastern and Midland Region is a clear priority in the two documents, with growth in population (to around 2.85 million) and employment (to 1.34 million) targeted. The NPF is currently under review to measure implementation and alignment with the 2022 Census, which will be completed by 2024.

The NDP prioritises infill development, with up to 50% of future housing in cities and major urban centres and 30% elsewhere to be provided within existing built-up areas serviced by existing facilities and along high-capacity public transport corridors. It also advocates for a transport-led housing development approach, which will allow for the emergence of sustainable and well-connected communities where active travel is feasible and attractive for many localised journeys and good quality public transport is available to facilitate longer journeys into the major urban centres. Urban compact growth will be supported under this NDP through investment in high quality integrated active travel and public transport systems and supporting amenities. This transport investment will be guided by the metropolitan area transport strategies which have been developed, or are in development, for the five cities.

Key NPF Priorities for the Eastern and Midland Region:

NPO 30: Local planning, housing, transport/accessibility and leisure policies will be developed with a focus on meeting the needs and opportunities of an ageing population along with the inclusion of specific projections, supported by clear proposals in respect of ageing communities as part of the core strategy of city and county development plans.

NPO 33: Prioritise the provision of new homes at locations that can support sustainable development and at an appropriate scale of provision relative to location.

NPO 58: Integrated planning for Green Infrastructure and ecosystem services will be incorporated into the preparation of statutory land use plans.

NPO 62: Identify and strengthen the value of greenbelts and green spaces at a regional and city scale, to enable enhanced connectivity to wider strategic networks, prevent coalescence of settlements and to allow for the long-term strategic expansion of urban areas.

NPO 68: A Metropolitan Area Strategic Plan (MASP) may enable up to 20% of phased population growth targeted in the principal city and suburban area to be accommodated in the wider metropolitan area (outside the city and suburbs/contiguous zoned area).

NPO 72: Planning authorities must apply a standardised approach to differentiate between Tier 1: Zoned land that is serviced and Tier 2: Zoned land that is serviceable within the life of the plan. When considering zoning lands for development purposed that require investment in service infrastructure, planning authorities will make a reasonable estimate of the full cost of delivery of the specified services.

A.1.2.2 National Investment Framework for Transport Planning in Ireland 2021

The National Investment Framework for Transport in Ireland (NIFTI) is the Department of Transport’s framework for prioritising future investment in the land transport network to support the delivery of the National Strategic Outcomes. NIFTI establishes four Investment Priorities: Decarbonisation, Protection and Renewal, Mobility of People and Goods in Urban Areas, and Enhanced Regional and Rural Connectivity. The four NIFTI Investment Priorities are supplemented by Modal and Intervention Hierarchies, shown below:

Modal Hierarchy	Intervention Hierarchy
1. Active Travel	1. Maintain
2. Public Transport	2. Optimise
3. Private Vehicles	3. Improve
	4. New

The investment priority most applicable to development at Rathmichael and Old Connaught is the Mobility of People and Goods in Urban Areas:

- Given spatial constraints within our cities, it is essential that urban congestion is tackled through measures such as improved and expanded walking and cycling infrastructure and the provision of better and more comprehensive public transport services. These measures must be designed with the needs of a diverse range of users in mind so that sustainable mobility alternatives are accessible to all residents of urban areas.

- Transport should be a central consideration for future development, reducing the need for new infrastructure and optimising existing transport capacity, mitigating the need to travel and ensuring that the most sustainable modes are encouraged.

Within the NIFTI Hierarchy, upgrades in the two LAP areas will likely be categorised as “New” infrastructure under the NIFTI hierarchy. The development will require capacity upgrades to the existing road network in the area to facilitate walking and cycling within the local area, as well as provide sustainable links to the proposed new DART station and Luas stops.

A.1.2.3 Climate Action Plan 2023

The Climate Action Plan 2023 stresses high-quality public transport, cycling and walking infrastructure must be provided to reduce reliance on private cars, as well as advocates for the Avoid-Shift-Improve approach: reducing or avoiding the need for travel, shifting to public transport, walking and cycling and improving the energy efficiency of vehicles.

To reach a 50% reduction in transport emissions by 2030, several metrics are proposed in the Climate Action Plan 2023 (CAP). The following transport metrics are relevant to the development at Rathmichael and Old Connaught:

- 20% reduction in total vehicle kms, including total car kms and commuting car kms
- 50% increase in daily active travel journeys
- 130% increase in daily public transport journeys
- 25% reduction in daily car journeys
- A shift in daily mode share from:
 - 72% car, 8% PT, 20% Active Travel (2018) to:
 - 53% car, 19% PT, 28% Active Travel (2030).
- Fleet electrification (175,000 passenger EVs, 20,000 commercial vans, 700 low emission HGV, 300 EV buses in PSO fleet, and expansion of electrified rail services.

A.1.2.4 National Sustainable Mobility Policy

The National Sustainable Mobility Policy provides an opportunity to change our daily travel choices by making it easier for people to travel by more sustainable modes – be that walking, cycling or public transport. The Policy aims to support this modal shift between now and 2030, through infrastructure and service improvements, as well as demand management and behavioural change measures. The Policy aims to continue to make existing and new walking, cycling and public transport networks more accessible for all users. The Policy is guided by three key principles and 10 high-level goals.

Table A-1: Principles and Goals of the National Sustainable Mobility Policy

Principles	Goals
Safe and Green Mobility	1. Improve mobility safety. 2. Decarbonise public transport. 3. Expand availability of sustainable mobility in metropolitan areas. 4. Expand availability of sustainable mobility in regional and rural areas. 5. Encourage people to choose sustainable mobility over the private car.
People Focused Mobility	6. Take a whole of journey approach to mobility, promoting inclusive access for all. 7. Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model. 8. Promote sustainable mobility through research and citizen engagement.
Better Integrated Mobility	9. Better integrate land use and transport planning at all levels. 10. Promote smart and integrated mobility through innovative technologies and development of appropriate regulation.

Principles and Goals applicable to Rathmichael/Old Connaught development:

- **Safe and Green Mobility:** Improve mobility safety, expand availability of sustainable mobility in metropolitan areas and in regional and rural areas.
- **People Focused Mobility:** Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model.
- **Better Integrated Mobility:** Better integrate land use and transport planning at all levels.

A.1.3 Regional Policy

A.1.3.1 Eastern and Midland Regional Spatial and Economic Strategy (RSES) 2019-2031

The Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Region Assembly (EMRA) 2019- 2031 sets out a framework to direct future growth of the Eastern and Midlands Region over the medium to long term. It sets out a hierarchy of settlement types, described below:

Settlement Typology	Description
Dublin City and Suburbs	International business core with a highly concentrated and diversified employment base and higher order retail, arts, culture and leisure offer. Acts as national transport hub with strong inter and intra-regional connections and an extensive commuter catchment.

Settlement Typology	Description
Regional Growth Centres	Regional Growth Centres are large towns with a high level of self-sustaining employment and services that act as regional economic drivers and play a significant role for a wide catchment area.
Key Towns	Large economically active service and/or county towns that provide employment for their surrounding areas and with high-quality transport links and the capacity to act as growth drivers to complement the Regional Growth Centres.
Self-Sustaining Growth Towns	A moderate level of jobs and services – includes sub-county market towns and commuter towns with good transport links and capacity for continued commensurate growth to become more self-sustaining.
Self-Sustaining Towns	High levels of population growth and a weak employment base which are reliant on other areas for employment and/or services and which require targeted ‘catch up’ investment to become more self-sustaining
Towns and Villages	Towns and villages with local service and employment functions.
Rural	Villages and the wider rural region.

The RSES indicates that ‘Key Towns’ have potential to accommodate commensurate levels of population and employment growth. The three Metropolitan ‘Key Towns’ in the region are Bray, Maynooth and Swords. Old Connaught, which falls within the administrative boundary of Dún Laoghaire-Rathdown, is included in the growth targets for the Key Town of Bray. The RSES states that in order for Bray to fulfil its growth potential, lands at Fassaroe to the west of the N11/ M11 are targeted for new housing, employment and major community and sports facilities, along with development of lands at Old Connaught. Rathmichael is not mentioned in the RSES.

The RSES also includes a Metropolitan Area Strategic Plan (MASP), which identifies Bray – Fassaroe (including Old Connaught) as part of the North-South (DART) Strategic Development Corridor. Short- and medium-term enabling infrastructure for growth in the Bray – Fassaroe area includes improved bus service between Bray and Fassaroe, N/M11 upgrades, a new bridge to Old Connaught, waste water upgrades, and area water network and storage upgrades. The Luas extension to Bray is included as a long-term piece of enabling infrastructure.

The MASP is shown in Figure A-1.



Figure A-1: Dublin Metropolitan Area Strategic Plan

RSES Key Principles applicable to Rathmichael/Old Connaught:

- **Sustainable Settlement Patterns:** Better manage the sustainable and compact growth of Dublin as a city of international scale and develop Athlone, Dundalk, Drogheda and a number of key complementary growth settlements of sufficient scale to be drivers of regional growth. (NSO 1, 7, 10)
- **Compact Growth and Urban Regeneration:** Promote the regeneration of our cities, towns and villages by making better use of under-used land and buildings within the existing built-up urban footprint and to drive the delivery of quality housing and employment choice for the Region’s citizens. (NSO 1)
- **Integrated Transport and Land Use:** Promote best use of Transport Infrastructure, existing and planned, and promote sustainable and active modes of travel to ensure the proper integration of transportation and land use planning. (NSO 2, 6, 8,9)
- **Sustainable Management of Water, Waste and other Environmental Resources:** Conserve and enhance our water resources to ensure clean water supply, adequate waste water treatment and greater resource efficiency to realise the benefits of the circular economy. (NSO 8, 9)

- **Enhanced Green Infrastructure:** Identify, protect and enhance Green Infrastructure and ecosystem services in the Region and promote the sustainable management of strategic natural assets such as our coastlines, farmlands, peatlands, uplands woodlands and wetlands. (NSO 8, 9)
- **Biodiversity and Natural Heritage:** Promote co-ordinated spatial planning to conserve and enhance the biodiversity of our protected habitats and species including landscape and heritage protection. (NSO 7, 8)
- **A Strong Economy Supported by Enterprise and Innovation:** To build a resilient economic base and promote innovation and entrepreneurship ecosystems that support smart specialisation, cluster development and sustained economic growth. (NSO 5,10)
- **Enhanced Strategic Connectivity:** Protect and enhance international connectivity and regional accessibility to support economic development, build economic resilience and support strengthened rural communities and economies including the blue-green economy and tourism. (NSO 2, 3, 6)

Table A-2: RSES Key Policy Objectives applicable to Rathmichael and Old Connaught

Heading	Regional Policy Objectives
Compact Growth	RPO 3.2: Local authorities, in their core strategies shall set out measures to achieve compact urban development targets of at least 50% of all new homes within or contiguous to the built up area of Dublin city and suburbs and a target of at least 30% for other urban areas.
Safe and Green Mobility	RPO 5.1: Support continued collaboration between infrastructure providers, state agencies and local authorities in the metropolitan area to inform cross sectoral investment plans and capital spending plans to accelerate the development of strategic development areas and secure the best use of public lands in the Dublin Metropolitan Area.
MASP Sustainable Transport	RPO 5.2: Support the delivery of key sustainable transport projects including Metrolink, DART and LUAS expansion programmes, BusConnects and the Greater Dublin Metropolitan Cycle Network and ensure that future development maximises the efficiency and protects the strategic capacity of the metropolitan area transport network, existing and planned. RPO 5.3: Future development in the Dublin Metropolitan Area shall be planned and designed in a manner that facilitates sustainable travel patterns, with a particular focus on increasing the share of active modes (walking and cycling) and public transport use and creating a safe attractive street environment for pedestrians and cyclists.
MASP Housing and Regeneration	RPO 5.5: Future residential development supporting the right housing and tenure mix within the Dublin Metropolitan Area shall follow a clear sequential approach, with a primary focus on the consolidation of Dublin and suburbs, and the development of Key Metropolitan Towns, as set out in the Metropolitan Area Strategic Plan (MASP) and in line with the overall Settlement Strategy for the RSES. Identification of suitable residential development sites shall be supported by a quality site selection process that addresses environmental concerns.

Heading	Regional Policy Objectives
MASP Green Infrastructure	RPO 5.7: Co-ordinate across local authority boundaries to identify, manage, develop and protect regional Green Infrastructure, to enhance strategic connections and develop a Green Infrastructure policy in the Dublin Metropolitan Area. RPO 5.8: Support the promotion and development of greenway infrastructure and facilities in the Dublin metropolitan area and to support the expansion and connections between key strategic cycle routes and greenways as set out in the NTA Greater Dublin Area Cycle Network Plan.
Integration of Transport and Land Use Planning:	RPO 8.1: The integration of transport and land use planning in the Region shall be consistent with the guiding principles expressed in the transport strategy of the RSES. RPO 8.2: The capacity and safety of the Region’s strategic land transport networks will be managed and enhanced, including through the management of travel demand in order to ensure their optimal use. RPO 8.3: That future development is planned and designed in a manner which maximises the efficiency and protects the strategic capacity of the metropolitan area transport network, both existing and planned and to protect and maintain regional accessibility. RPO 8.4: Land use plans within the GDA shall demonstrate a consistency with the NTA’s Transport Strategy for the Greater Dublin Area and plans with or outside of the GDA shall be consistent with the guiding principles expressed in the RSES.
Mobility Management and Travel Plans	RPO 8.7: To promote the use of mobility management and travel plans to bring about behaviour change and more sustainable transport use.
Housing	RPO 9.3: Support local authorities, approved housing bodies and other sectoral agencies in the provision of a greater diversity of housing type and tenure, including social and affordable housing and exploring new models of low cost rental and affordable homeownership. RPO 9.4: Design standards for new apartment developments should encourage a wider demographic profile which actively includes families and an ageing population.
Healthy Placemaking	RPO 9.10 In planning for the creation of healthy and attractive places, there is a need to provide alternatives to the car and to prioritise and promote cycling and walking in the design of streets and public spaces. Local authorities shall have regard to the Guiding Principles for ‘Healthy Placemaking’ and ‘Integration of Land Use and Transport’ as set out in the RSES and to national policy as set out in ‘Sustainable Residential Development in Urban Areas’ and the ‘Design Manual for Urban Roads and Streets (DMURS)’ RPO 9.12: In Planning policy formulation and implementation local authorities and other stakeholders shall be informed by the need to cater for all levels of disability, through the appropriate mitigation of the built environment, and in particular for the needs of an ageing population.

Heading	Regional Policy Objectives
	RPO 9.13: Local authorities and relevant agencies shall ensure that new social infrastructure developments are accessible and inclusive for a range of users by adopting a universal design approach and provide for an age friendly society in which people of all ages can live full, active, valued and healthy lives.

A.1.3.2 Transport Strategy for the Greater Dublin Area 2022-2042

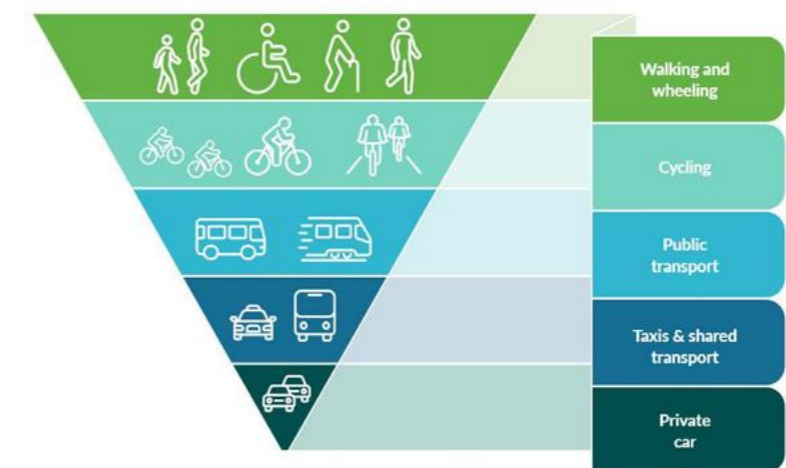
The National Transport Authority’s (NTA) Transport Strategy for the Greater Dublin Area (GDA) plans how transport will be provided across the GDA.

The GDA Transport Strategy forecasts a 24-hour modal share to 2042, in the Metropolitan Dublin area, of 41.9% Car, 19.7% Public Transport, 24.3% Walking and 14.1% Cycling. The AM Peak Period Mode Share forecast in the GDA strategy is indicated as 36% Car, 26.3% Public Transport, 22.7% Walking and 15% Cycling.

The GDA Transport Strategy replaces “Predict and Provide” methodology with “Decide and Provide”. Instead of using historical trends of travel to model new futures and provide corresponding infrastructure, we should shift to deciding what future we want, and building the infrastructure to support this future.

The following measures are particularly applicable to development at Rathmichael and Old Connaught:

- **Measure PLAN2 – The Road User hierarchy:** The NTA, in the decision-making process around the design, planning and funding of transport schemes in the GDA, will be guided by the priority afforded to each mode in the Road User Hierarchy as set out in the Transport Strategy.



- **Measure PLAN3 – Housing and Transport:** SDZ Planning Schemes, Local Area plans and large planning applications should be accompanied by appropriate Transport Plans or Transport Assessments setting out how the plan or development minimises the need to travel and how PT, walking and cycling together can cater for the majority of travel demand. They should also be accompanied by a statement setting out the infrastructure and services required to achieve this, and an agreed phasing programme for its provision.

- Measure PLAN4 – Consolidated Development: In accordance with the NPF and RSES, the NTA will support and prioritise development patterns in the GDA which seek to consolidate development as a means of preventing urban sprawl, reducing the demand for long-distance travel and maximising the use of existing transport infrastructure and services. Peripheral development will be supported in exceptional circumstances – on an evidence-based planned approach – where located on high capacity public transport routes and for specific land uses that cannot be accommodated in town and city centres.
- Measure PLAN7 – Transit-Oriented Development: The NTA will continue to support and facilitate the delivery of Transit-Oriented Development at locations identified as appropriate for such, and will work with EMRA and the local authorities in identifying further locations served by existing and proposed public transport which are appropriate for high density development supporting a mix of uses. Transit-Oriented Development is considered within 800m of an existing or proposed DART, Luas or Metro stop, and within 400m of a proposed BusConnects Spine route.
- Measure PLAN8 – Mixed Uses: The NTA will continue to support and facilitate land use policies which seek to provide for an appropriate mix of uses at the district and neighbourhood level.
- Measure PLAN9 – Filtered Permeability: Development Plans, SDZ Planning Schemes and Local Area Plans in the GDA should ensure that the road and street networks in new development areas are designed on the basis of providing for filtered permeability, and should incorporate measures which deliver filtered permeability in existing neighbourhoods.
- Measure PLAN14 – Urban Design in Major Infrastructure Projects: The NTA will incorporate a high standard of urban design and placemaking, taking into account architectural heritage, into the planning and design of all major public transport infrastructure schemes, and will consider how greater biodiversity can be fostered.
- MEASURE PLAN17 – Local Transport Plans: The NTA will promote and assist Local Authorities to develop Local Transport Plans based on the ABTA methodology as part of the statutory plan-making process.
- Measure INT3 – Integration of all Modes in Transport Schemes: It is the intention of the NTA, in the design and planning of transport schemes, to ensure that the needs of all transport modes are considered, as appropriate, based on the objectives of the scheme and on the road user hierarchy.
- Measure CYC2 – Cycle Infrastructure Design: It is the intention of the NTA to ensure that cycle infrastructure in the GDA provides an appropriate quality of service to all users, through the implementation of the design guidance contained in the latest version of the National Cycle Manual.

- Measure CYC6 – Cycle Parking Strategies: Local authorities will prepare public cycle parking strategies in order to ensure that there is sufficient short stay safe and secure cycle parking available on-street and/ or off-street, including spaces for cargo bikes and other non-standard bike designs, in city, town and village centres.
- Measure LRT5 – Luas Bray: It is intended to extend the Luas Green Line southwards in order to serve the Bray and Environs area.
- Measure LRT9 – Luas Green Line: It is intended to deliver significant additional capacity on the Luas Green Line through the provision of additional fleet and necessary infrastructure to meet forecast passenger demand.



Figure A-2: GDA Transport Strategy Proposed 2042 Rail Network

- Measure ROAD9 - Regional and Local Roads Policy:
 1. Implement necessary upgrades to the regional and local road network in line with the Principles of Road Development set out above;
 2. Enhance orbital movement between the N3, the N4 and N7 national roads, by improving existing roads and/or the development of new road links where deemed appropriate, for the purpose of providing resilience to the operation of the M50 and incorporating provision for sustainable transport;
 3. Where part of a sustainable mobility plan, to develop orbital roads around towns, accompanied by, and facilitating, enhanced public transport, cycling and pedestrian facilities in the relevant centre;
 4. Develop appropriate road links to service development areas, including the provision of public transport (where required) and active travel facilities;
 5. Enhance pedestrian and cycle safety through the provision of safer road junctions, improved pedestrian crossing facilities and

the incorporation of appropriate cycle measures including signalised crossings where necessary; and

6. Implement various junction improvements, realignments and local reconfigurations on the regional and local road network to address safety deficiencies and/or support integrated transport proposals catering for all road users.

- Measure ROAD10 – Urban Roads and Streets The implementation of the Transport Strategy will support and facilitate a place based approach to urban roads and streets, based on the measures in Chapter 14.
- Measure TM12 – Residential Parking Standards: It is recommended that local authorities incorporate maximum residential parking standards into their Development Plans guided by the provisions set out in Table 14.1.

Figure 14.1: Proposed Maximum Residential Parking Standards

Location	Maximum Parking Provision *
Central Dublin (Inside Canals and including Docklands)	Zero to 0.5 spaces per unit
Locations Between the M50 and Canals	Zero to 1.5 space per unit
Locations Between the Metropolitan Boundary and the M50	Up to 1.5 space per unit
Hinterland Towns	Up to 2 spaces per unit / subject to assessment through Local Transport Plan
Small Settlements	Subject to local assessment

- Measure TM13 – Car Free Residential Developments: The NTA will support local authorities in assessing the potential for, and delivery of car-free residential developments in locations close to Dublin City Centre and at major rail-based interchanges / Mobility Hubs.

A.1.3.3 2022 Greater Dublin Area Cycle Network Plan

The GDA Cycle Network plans cycling infrastructure in the GDA based on urban, interurban and green route networks. The study area generally has identified interurban routes, connecting the currently-rural area to nearby urban areas. Area maps are shown in Figure A-3 below.

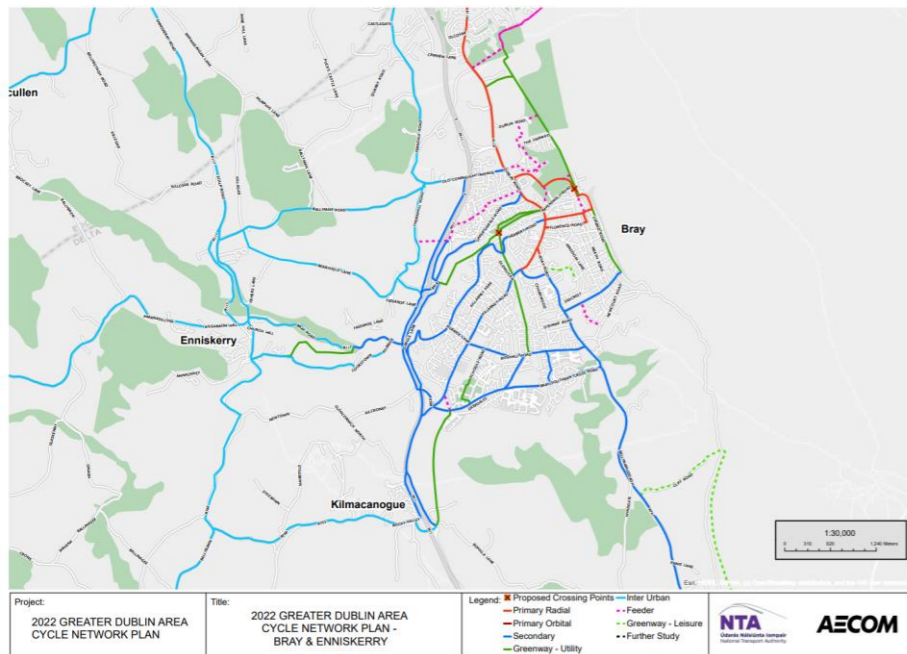
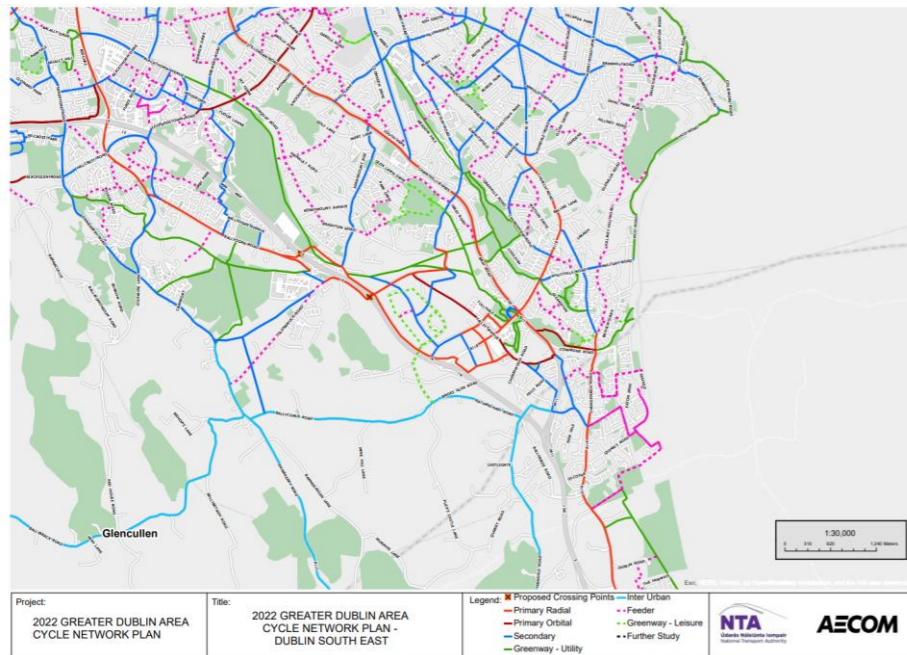


Figure A-3: GDA Cycle Network in the LAP Areas

A.1.3.4 Integrated Implementation Plan 2019-2024

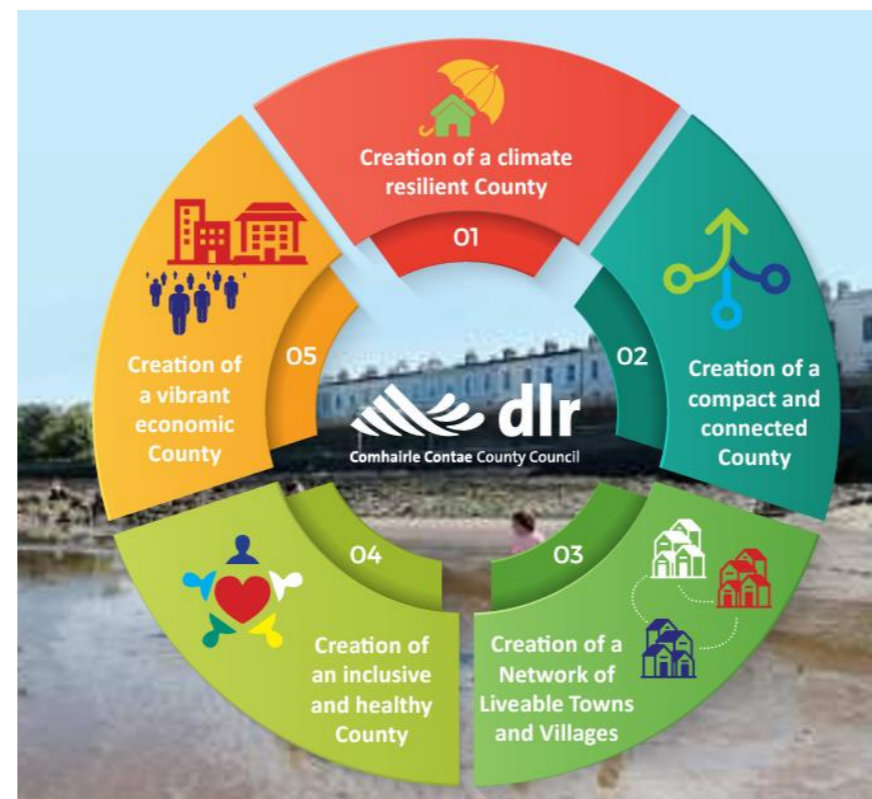
The NTA’s Integrated Implementation Plan plans the implementation of the GDA Transport Strategy over a 5-year period. The Transport Strategy for the GDA identified four extensions to the light rail network, which include Luas to Bray.

One of the identified BusConnects CBCs is Bray – City Centre, which will pass in the vicinity of the Rathmichael and Old Connaught. The Emerging Preferred route is currently along the R119, east of the M11. This route has been submitted in a Statutory Planning Application to An Bord Pleanála in August 2023.

A.1.4 Local Policy

A.1.4.1 Dún Laoghaire-Rathdown County Development Plan 2022-2028

The Dún Laoghaire-Rathdown County Development Plan (DLR CDP) is made of five Strategic County Outcomes, shown below:



The development plan identifies the Rathmichael and Old Connaught LAP lands. The County Development Plan has land use zonings of residential A1 – “to provide for new residential communities and Sustainable Neighbourhood Infrastructure in accordance with approved local area plans” and other applicable land use zonings in the area. This will achieve a proposed yield of 2,005 new residential units in Old Connaught and 2,431 new residential units in Rathmichael.

An additional 38 hectares of land to the north of Old Connaught is identified as a “Strategic Land Reserve” which has potential to accommodate a further 1,050 residential units beyond the lifetime of the plan.

A site in Old Connaught has an “ED” objective for a future school. The DLR CDP Core Strategy is shown in Figure A-4.

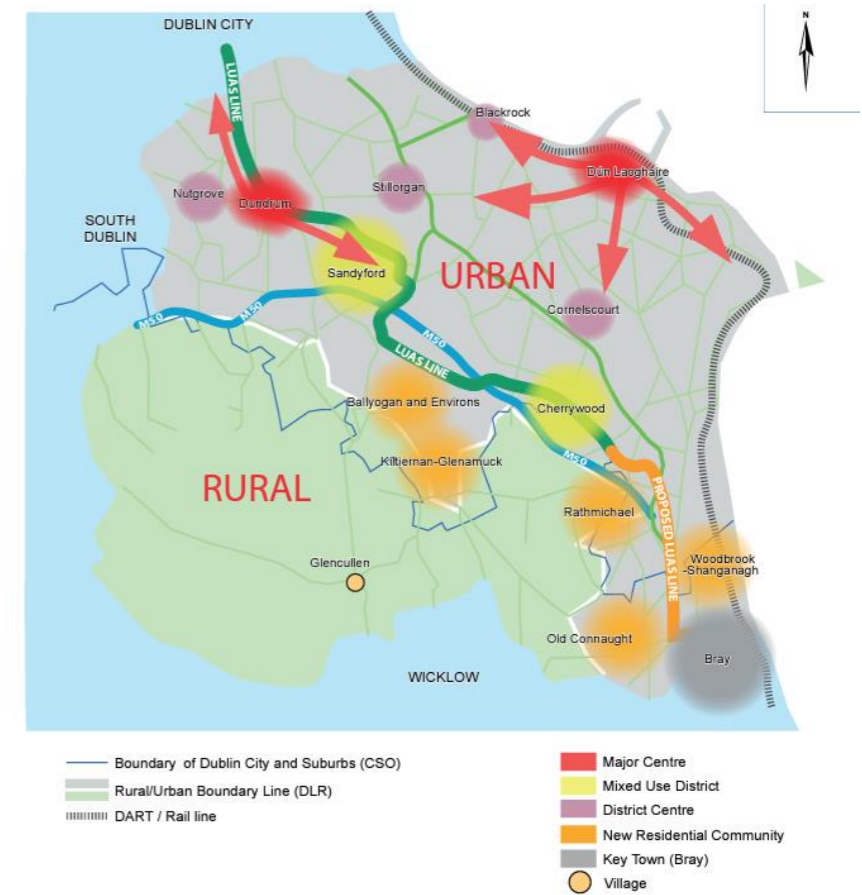


Figure A-4: DLR County Development Plan Core Strategy Map

The Specific Local Objectives below apply to the two LAP areas:

Table A-3: DLR Development Plan Specific Local Objectives applicable to Rathmichael and Old Connaught

Policy Objective	Description
SLO 22	To retain, improve and encourage the provision of sustainable neighbourhood infrastructure facilities within the outlined group of buildings / land.
SLO 86	To prepare a Local Area Plan for Rathmichael.
SLO 92	That no insensitive or large-scale development will take place above the 90-metre contour line at Rathmichael, from Old Connaught Golf Course to Pucks Castle Lane – Maps 10-14.
SLO 100	To investigate and consider the feasibility of designing and implementing a Management Plan for Carrickgollogan Hill area, to the north of Murphy’s Lane and including the Lead Mine complex.
SLO 101	To protect and conserve Ballyman Glen Special Area of Conservation.
SLO 103	To accord with the policies of the adopted Woodbrook/ Shanganagh Local Area Plan.
SLO 104	To investigate the potential upgrading of the Wilford Interchange to provide connectivity to lands west of the M11 and Old Connaught

Policy Objective	Description
	Village with any such improvements to be informed by the outcome of the TII's on-going Corridor Studies.
SLO 105	To prepare a Local Area Plan for Old Connaught.
SLO 107	To co-operate with the National Transport Authority, Transport Infrastructure Ireland and Wicklow County Council in the establishment of a busway and bridge from Fassaroe to Old Connaught over County Brook at Ballyman Glen which facilitates walking and cycling to provide connections between the proposed new development areas of old Connaught and Fassaroe (Wicklow County).
SLO 108	To provide pedestrian/cycle access across the M11 corridor in the vicinity of Allies River Road, the corridor and route selection process outlined in Policy Objective T24 should be followed.
SLO 150	To allow for the provision of a new pedestrian and cycle link via a new combined foot and cycleway bridge from Rathmichael Road towards the Luas station at Cherrywood Business Park passing under the existing M50 motorway bridge and crossing the R116 Brides Glen Road and valley.

The Policy Objectives below apply to the two LAP areas:

Table A-4: DLR Development Plan Key Policy Objectives applicable to Rathmichael and Old Connaught

Policy Objective	Description
CS11 – Compact Growth:	Deliver 100% of all new homes, that pertain to Dublin City and Suburbs, within or contiguous to its geographic boundary.
PHP2: Sustainable Neighbourhood Infrastructure	Protect and improve existing sustainable neighbourhood infrastructure as appropriate. Facilitate the provision of new sustainable neighbourhood infrastructure that is accessible and inclusive for a range of users consistent with RPO0.13 and RPO 9.14 of the RSES. Encourage the provision of multi-functional facilities, space and lands in the delivery and/or improvement of sustainable neighbourhood infrastructure.
PHHP3 – Planning for Sustainable Communities	Ensure that an appropriate level of supporting neighbourhood infrastructure is provided or that lands are reserved for Sustainable Neighbourhood Infrastructure (SNI), in conjunction with, and as an integral component of, residential development in new residential communities as identified in the Core Strategy. Identify, provide and/or improve (as appropriate) supporting sustainable neighbourhood infrastructure in tandem with residential development in renewal/redevelopment areas and existing residential neighbourhoods.
PHP4 – Villages and Neighbourhoods:	Implement a strategy for residential development based on a concept of sustainable urban villages.

Policy Objective	Description
	Promote and facilitate the provision of '10-minute' neighbourhoods.
PHP5 – Community Facilities:	Support the development, improvement and provision of a wide range of community facilities throughout the County where required. Encourage the provision of appropriate childcare facilities as an integral part of proposals for new residential developments and to improve/expand existing childcare facilities across the County. In general, at least one childcare facility should be provided for all new residential developments subject to demographic and geographic needs. M Encourage the provision of childcare facilities in a sustainable manner to encourage local economic development and to assist in addressing disadvantage.
PHP18 – Residential Density	Increase housing (houses and apartments) supply and promote compact urban growth through the consolidation and re-intensification of infill/brownfield sites having regard to proximity and accessibility considerations, and development management criteria set out in Chapter 12. Encourage higher residential densities provided that proposals provide for high quality design and ensure a balance between the protection of existing residential amenities and the established character of the surrounding area, with the need to provide for high quality sustainable residential development.
PHP24 – Housing in Green Belt Areas	It is a Policy Objective to protect the green belt areas and restrict residential development.
PHP27 – Housing Mix	Encourage the establishment of sustainable residential communities by ensuring that a wide variety of housing and apartment types, sizes and tenures is provided throughout the County in accordance with the provisions of the Housing Strategy and Housing Need Demand Assessment (HNDA) and any future Regional HNDA.
PHP35: Healthy Placemaking	Ensure that all development is of high-quality design with a focus on healthy placemaking consistent with NPO 4, 26 and 27 of NPF, and RPO 6.1, 6.12, 9.10 and 9.11 of the RSES. Promote the guidance principles set out in the 'Urban Design Manual – A Best Practice Guide' (2009) and in the 'Design Manual for Urban Roads and Streets' (2013). Ensure that development proposals are cognisant of the need for proper consideration of context, connectivity, inclusivity, variety, efficiency, distinctiveness, layout, public realm, adaptability, privacy and amenity, parking, wayfinding and detailed design.
PHP36: Inclusive Design & Universal Access	Promote and support the principles of universal design ensuring that all environments are inclusive and can be used to the fullest extent possible by all users regardless of age, ability or disability consistent with RPO 9.12 and 9.13 of the RSES.

Policy Objective	Description
T1 – Integration of Transport and Land Use Policies	Actively support sustainable modes of transport and ensure that land use and zoning are aligned with the provision and development of high quality public transport systems.
T3 – Delivery of Enabling Transport Infrastructure	Support the delivery of enabling transport infrastructure so as to allow development take place in accordance with the Core Strategy of this Plan and the settlement strategy of the RSES. (Consistent with RPO 4.40, 10.2, 10.3, 10.11, 10.16 of the RSES).
T9 – Luas Extension and MetroLink	Promote, facilitate and cooperate with other agencies in securing the extension of the Luas network in the County as set out in the NTA's 'Greater Dublin Area Transport Strategy 2016-2035' and including any future upgrade to Metro. (Consistent with RPO 4.40 and 8.8 of the RSES) The Council will protect and safeguard the provisional alignment and surrounding lands, of Luas Line B2 as detailed on Map Nos. 10 and 14. The Council will maintain this proposed route free from development and any encroachment by inappropriate uses which could compromise the future development of this rail corridor for public transport facilities. The route of a proposed indicative Luas Spur from Old Connaught Avenue to Fassaroe, Bray as shown on Map 14 shall be further considered and informed by and in the context of the next Transport Strategy for the Greater Dublin Area.
T11 – Walking and Cycling	Secure the development of a high quality, fully connected and inclusive walking and cycling network across the County and the integration of walking, cycling and physical activity with placemaking including public realm permeability improvements.
T12 – Footways and Pedestrian Routes	Maintain and expand the footway and pedestrian route network to provide for accessible, safe pedestrian routes within the County in accordance with best accessibility practice.
T13 – County Cycle Network	Secure improvements to the County Cycle Network in accordance with the Dún Laoghaire-Rathdown Cycle Network Review whilst supporting the NTA on the development and implementation of the Greater Dublin Area Cycle Network Plan 2013 and subsequent revisions, subject to environmental assessment and route feasibility.
T23 – Roads and Streets	Secure improvements to the County road network – including improved pedestrian and cycle facilities, subject to the outcome of environmental assessment (SEA, EIA and AA), flood risk assessment and the planning process (RPO 8.10, RPO 8.16)
RET4 – Retail Hierarchy	Have regard to the Retail Strategy for the Greater Dublin Area 2008–2016 and the Eastern and Midland Regional Authorities 'Regional Spatial and Economic Strategy 2019–2031', in defining the retail hierarchy of the County and defining the role of the Major Town, District, and Neighbourhood Centres in the County. It is Council policy to promote the viability and vitality of its existing main retail centres and to also promote their multi-

Policy Objective	Description
	functional role, while continuing to protect and improve the amenity of surrounding areas.
C58 – Ecosystem Services Approach	Promote an ecosystem services approach in the preparation of lower-level Plans, Strategies and Development Management.
CA18 – Urban Greening	Retain and promote urban greening – as an essential accompanying policy to compact growth – which supports the health and wellbeing of the living and working population, building resilience to climate change whilst ensuring healthy placemaking. Significant developments shall include urban greening as a fundamental element of the site and building design incorporating measures such as high-quality biodiverse landscaping (including tree planting), nature-based solutions to SuDS and providing attractive routes and facilities for the pedestrian and cyclist.
CA19: Community Woodlands	Promote and support Community Woodland Schemes in line with government policy.
MFC3 – Placemaking in our Towns and Villages	Support proposals for development in towns and villages that provide for a framework for renewal where relevant and ensure the creation of high quality public realm and sense of place. Proposals should also enhance the unique character of the County’s Main streets where relevant.
GIB1: Green Infrastructure Strategy	Continue to implement, and update, the DLR Green Infrastructure (GI) Strategy, to protect existing green infrastructure and encourage and facilitate, in consultation with relevant stakeholders, the development, design and management of high quality natural and semi-natural areas. This recognises the ecosystems approach and the synergies that can be achieved with regard to sustainable transport, provision of open space, sustainable management of water, protection and enhancement of biodiversity.
GIB4: High Amenity Zones	Conserve and enhance existing High Amenity Zones and to seek to manage these and other areas to absorb further recreational uses and activity without damaging their unique character.
GIB5: Historic Landscape Character Areas	In assessing development proposals and in the preparation of plans, it is a Policy Objective to have regard to the recommendations and findings of the Historic Landscape Character Assessments (HLCA), already undertaken for a number of urban-rural fringe areas of the county most likely to come under development pressure.
GIB6: Views and Prospects	Preserve, protect and encourage the enjoyment of views and prospects of special amenity value or special interests, and to prevent development, which would block or otherwise interfere with Views and/or Prospects.
GIB12: Access to Natural Heritage	Promote, protect and enhance sustainable and appropriate access to the natural heritage of the County, where practicable, in a balanced

Policy Objective	Description
	way while protecting the natural heritage of the County. – SAC/SPA/pNHA
GIB14: Public Rights-of-Way	ii. Preserve, protect, promote, and improve for the common good all existing public rights-of-way which contribute to general amenity. ii. Extend or enhance existing rights-of-way either by agreement with landowners or using compulsory powers in the interest of ensuring access to amenities, including the coast, upland areas, riverbanks, heritage sites, geological sites and National Monuments.
GIB15: Recreation Access Routes	Preserve all Recreation Access Routes, which contribute to general amenity.
GIB17: Trails, Hiking and Walking Routes	Promote the development of Regional and local networks of hiking and walking routes/trails. These should be waymarked/signposted and listed, where feasible and appropriate.
GIB18: Protection of Natural Heritage and the Environment	Protect and conserve the environment including, in particular, the natural heritage of the County and to conserve and manage Nationally and Internationally important and EU designated sites – such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), proposed Natural Heritage Areas (pNHAs) and Ramsar sites (wetlands) – as well as non-designated areas of high nature conservation value known as locally important areas which also serve as ‘Stepping Stones’ for the purposes of Article 10 of the Habitats Directive
GIB19: Habitats Directive	Ensure the protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.
GIB20: Biodiversity Plan	To support the provisions of the forthcoming DLR County Biodiversity Action Plan, 2021-2025
GIB21: Designated Sites	Protect and preserve areas designated as proposed Natural Heritage Areas, Special Areas of Conservation, and Special Protection Areas. It is Council policy to promote the maintenance and as appropriate, delivery of ‘favourable’ conservation status of habitats and species within these areas.
GIB22: Non-Designated Areas of Biodiversity Importance	Protect and promote the conservation of biodiversity in areas of natural heritage importance outside Designated Areas and to ensure that notable sites, habitats and features of biodiversity importance – including species protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979, the Habitats Directive 1992, Birds and Habitats Regulations 2011, Flora (Protection) Order, 2015, Annex I habitats, local important areas, wildlife corridors and rare species – are adequately protected. Ecological assessments will be carried out for all developments in areas that support, or have potential to support, features of biodiversity importance or rare and protected

Policy Objective	Description
	species and appropriate mitigation/ avoidance measures will be implemented. In implementing this policy, regard shall be had to the Ecological Network, including the forthcoming DLR Wildlife Corridor Plan, and the recommendations and objectives of the Green City Guidelines (2008) and ‘Ecological Guidance Notes for Local Authorities and Developers’ (Dún Laoghaire-Rathdown Version 2014).
GIB23: County-Wide Ecological Network	protect the Ecological Network which will be integrated into the updated Green Infrastructure Strategy and will align with the DLR County Biodiversity Action Plan. Creating this network throughout the County will also improve the ecological coherence of the Natura 2000 network in accordance with Article 10 of the Habitats Directive. The network will also include non designated sites.
GIB24: Rivers and Waterways	Maintain and protect the natural character and ecological value of the river and stream corridors in the County and where possible to enhance existing channels and to encourage diversity of habitat and nature-based solutions that incorporate biodiversity features. It is also policy (subject to the sensitivity of the riverside habitat), to provide public access to riparian corridors, to promote improved passive recreational activities.
GIB25: Hedgerows	Retain and protect hedgerows in the County from development, which would impact adversely upon them. In addition, the Council will promote the protection of existing site boundary hedgerows and where feasible require the retention of these when considering a grant of planning permission for all developments. The Council will promote the County’s hedgerows by increasing coverage, where possible, using locally native species and to develop an appropriate code of practice for road hedgerow maintenance. The Council will promote the protection of existing hedgerows when considering a grant of planning.
GIB26: Geological Sites	To protect, promote and preserve sites of Geological and Geomorphological importance, in particular the proposed Natural Heritage Areas (NHAs), and any County Geological Sites (CGS), that become designated during the lifetime of the Plan.
GIB27: Green Belts	Retain the individual physical character of towns and development areas by the designation of green belt areas, where appropriate.
GIB28: Invasive Species	Prepare an ‘Invasive Alien Species Action Plan’ for the County which will include actions in relation to Invasive Alien Species (IAS) surveys, management and treatment and to also ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are or were previously present, the applicants will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations 2011 (S.I. 477/2011).

Policy Objective	Description
GIB29: Nature Based Solutions	Increase the use of Nature Based Solutions (NBS) within the County, and to promote and apply adaption and mitigation actions that favour NBS, which can have multiple benefits to the environment and communities. NBS has a role not only to meet certain infrastructure related needs (e.g. flooding management), and development needs, but also to maintain or benefit the quality of ecosystems, habitats, and species.
OSR2: Hierarchy of Parks and Public Open Space	Provide a hierarchy of attractive parks and public open spaces, which vary in size and nature, are all inclusive, by being readily accessible and at a convenient distance from people's home and/ or places of work.
OSR3: Future Improvements	Improve, plant and develop more intensive recreational and leisure facilities within parks and public open spaces insofar, as resources will permit, while ensuring that the development of appropriate complementary facilities does not detract from the overall amenity of the spaces.
OSR4: Public Open Space Standards	Promote public open space standards generally in accordance with overarching Government guidance documents 'Sustainable Residential Development in Urban Areas – Guidelines for Planning Authorities', (2009), the accompanying 'Urban Design Manual – A Best Practice Guide', and the 'Sustainable Urban Housing: Design Standards for new Apartments', (2020).
OSR5: Public Health, Open Space and Healthy Placemaking	Support the objectives of public health policy including Healthy Ireland and the National Physical Activity Plan (NPAP) 2016, to increase physical activity levels across the whole population thus creating a society, which facilities people whether at home, at work or at play to lead a more active way of life (consistent with RPO9.16).
OSR6: Allotments and Community Gardens	Support the provision of additional public allotments and community gardens to improve their provision and distribution across the County.
OSR7: Trees, Woodland and Forestry	Implement the objectives and policies of the Tree Policy and the forthcoming Tree Strategy for the County, to ensure that the tree cover in the County is managed, and developed to optimise the environmental, climatic and educational benefits, which derive from an 'urban forest', and include a holistic 'urban forestry' approach.
OSR8: Greenways and Blueways Network	Develop a comprehensive network of County Greenways linking parks and public open spaces and to liaise with adjoining local authorities and other stakeholders to achieve and improve wider external linkages and corridors, to enable enhanced connectivity to wider strategic networks, and to allow for the long-term strategic expansion of urban areas (consistent with NPO 62 of the NPF).
OSR13: Play Facilities and Nature Based Play	Support the provision of structured, and unstructured play areas with appropriate equipment and facilities, incorporating and facilitating Nature-based Play with respect to the provision of Play Opportunities throughout the County, and to support the

Policy Objective	Description
	aspirations of the forthcoming Play Policy prepared within the lifetime of the Plan. These play facilities will also seek to maximise inclusivity and accessibility, to ensure that the needs of all age groups and abilities – children, teenagers, adults and older people – are facilitated in the public parks, open spaces and the public realm of Dún Laoghaire-Rathdown.
HER1: Protection of Archaeological Heritage	Protect archaeological sites, National Monuments (and their settings), which have been identified in the Record of Monuments and Places and, where feasible, appropriate and applicable to promote access to and signposting of such sites and monuments.
HER8: Work to Protected Structures	<ol style="list-style-type: none"> i. Protect structures included on the RPS from any works that would negatively impact their special character and appearance. ii. Ensure that any development proposals to Protected Structures, their curtilage and setting shall have regard to the 'Architectural Heritage Protection Guidelines for Planning Authorities' published by the Department of the Arts, Heritage and the Gaeltacht. iii. Ensure that all works are carried out under supervision of a qualified professional with specialised conservation expertise. iv. Ensure that any development, modification, alteration or extension affecting a Protected Structure and/or its setting is sensitively sited and designed, and is appropriate in terms of the proposed scale, mass, height, density, layout and materials. v. Ensure that the form and structural integrity of the Protected Structure is retained in any redevelopment and that the relationship between the Protected Structure and any complex of adjoining buildings, designed landscape features, or views and vistas from within the grounds of the structure are respected. vi. Respect the special interest of the interior, including its plan form, hierarchy of spaces, architectural detail, fixtures and fittings and materials. vii. Ensure that new and adapted uses are compatible with the character and special interest of the Protected Structure. viii. Protect the curtilage of protected structures and to refuse planning permission for inappropriate development within the curtilage and attendant grounds that would adversely impact on the special character of the Protected Structure. ix. Protect and retain important elements of built heritage including historic gardens, stone walls, entrance gates and piers and any other associated curtilage features.

Policy Objective	Description
	x. Ensure historic landscapes and gardens associated with Protected Structures are protected from inappropriate development.
HER2: Protection of Archaeological Material in Situ	Seek the preservation in situ of all archaeological monuments included in the Record of Monuments and Places, and of previously unknown sites, features and objects of archaeological interest that become revealed through development activity.
HER20: Buildings of Vernacular and Heritage Interest	<ol style="list-style-type: none"> i. Retain, where appropriate, and encourage the rehabilitation and suitable reuse of existing older buildings/structures/features which make a positive contribution to the character and appearance of the area and streetscape in preference to their demolition and redevelopment and to preserve surviving shop and pub fronts of special historical or architectural interest including signage and associated features. ii. Encourage the retention and/or reinstatement of original fabric of our historic building stock such as windows, doors, roof coverings, shopfronts, pub fronts and other significant features. iii. Ensure that appropriate materials be used to carry out any repairs to the historic fabric.
HER26: Historic Demesnes and Gardens	Historic demesnes and gardens should be identified and protected to reflect and acknowledge their significance as part of our National Heritage. The following houses and gardens are listed: Cabinteely House, Marlay House, Fernhill and Old Conna.

As a part of the development plan, Landscape Character Assessments (LCA) were undertaken for Rathmichael and Ballyman (which mentions Old Connaught):

- **Rathmichael:** The area slopes gently westwards up to Carrickgollogan. A number of roads with virtually intact hedgerows criss-cross the area giving a rural ambience, despite the fact that the area is dotted with enclaves of low density residential units.
- **Ballyman:** Between Carrickgollogan and the Ballyman Road a line of pylons traverses the site and crosses the Ballyman Road amidst residential development. This enclosure also includes the village settlement of Old Connaught and the area around this settlement which is zoned for future development but which is currently unserved in terms of water and waste water infrastructure. The area is distinctively agricultural and low lying in nature with views across to Bray Head and the Sugar Loaf. To have regard to the recommendations and findings of the Historic Landscape Character Assessment for Old Connaught.

The DLR CDP states that a minimum of 10% of the overall site area for all large-scale, mixed-use, non-residential, and commercial developments will be reserved for use as public Open Space/Urban realm space. Any residential element of a mixed-use scheme shall provide public open space in accordance with the table below.

Location:	Public Open Space Standards (minimum):
Residential Development in new residential communities as shown in the Core strategy – figure 2.9.	15% (of site area)
Residential Development in the existing built up area.	15% (of site area)
Institutional and Redevelopment of SNI use	25% (of site area)

The transport section of the development plan includes an overall policy approach to adopt the ‘Avoid-Shift-Improve Approach’, avoiding the need to travel in the first place, shifting to sustainable transport modes, and improving the modes that we do have.

New active travel links over the M11/N11 were identified at the following locations:

- In the vicinity of Allies River Road
- Love Lane Bridge

Six-year roads objectives in the area include:

- M50 Cherrywood Interchange to Rathmichael – new link road Ferndale Road
- Link from Ferndale Road to Dublin Road

Long-term roads objectives in the area include:

- M50 Third Lane (Sandyford Interchange to M11)
- M50 Western Parallel Road from Old Connaught to Cherrywood Environs
- Rathmichael Road

In tandem with the build out of land for development as set out in the Core Strategy there will be an element of enabling transport infrastructure that will also be delivered. Such transport Infrastructure includes the Luas Green Line Enhancement Project, Luas Green Line Extension to Bray, BusConnects, the improvements set out in the ‘Bray and Environs Transport Study’ (2019) and other projects as set out in the 6 year Road Objectives, subject to detailed design having regard to environmental and appropriate assessment, public consultation, approval, finance and resources. Requirements will also take into account the finding of any Area Based Transport Assessment (ABTA) prepared as part of the Old Connaught Local Area Plan process.

With regard to the expansion of Bray – Fassaroe, the Council will collaborate with Wicklow County Council, the NTA and the TII to facilitate the delivery of enabling transport infrastructure to facilitate this area including Old Connaught (consistent with RPO 4.40 of the RSES).

The Bray and Environs Transport Study 2019 emphasises the need to reduce the overall demand for travel, prioritise pedestrians and cyclists including the implementation of the Greater Dublin Area Cycle Network Plan (and subsequent revisions), prioritise public transport increasing the frequency of Dart and bus services, support the Metrolink to Sandyford and Luas to Bray, protect the national road network facilitating demand management on the N11/M11 and minimise road construction. The Bray and Environs Transport Study sets out enabling Infrastructure as follows:

- Woodbrook Dart Station
- Strategic Park and Ride
- Bus Connects/Core Bus Corridor
- Busway from Fassaroe to Old Connaught over the County Brook at Ballyman Glen (which also facilitates walking and cycling)
- Support the delivery of a bus service from Sandyford via Rathmichael and Old Connaught to Bray Dart Station until the Luas Green Line extension to Bray is suitably advanced
- Facilitate the implementation of demand management measures on the N/M11 and M50
- Upgrade of the road system in Rathmichael and Old Connaught in order to facilitate the safe, convenient and reliable movement of public transport vehicles, cyclists and pedestrians – including:
 - Upgrade of Ferndale Road
 - Development of a new link road from Ferndale Road to Dublin Road.
 - M50 Cherrywood Interchange to Rathmichael Link Road.
 - The inclusion of the preceding three proposals is dependent on further assessment as set out in; the ‘Spatial Planning and National Roads Guidelines for Planning Authorities’ in particular Section 2.7 and Section 5.8.3 Principles of Road Development, feasibility and environmental assessment of the NTA Transport Strategy for the GDA; and demonstration of their compatibility of with the strategic function of the national road network as set out in Sections 2.2 in the Bray and Environs Transport Study (2019).
- Delivery of Metro to Sandyford and Luas Green Line extension to Bray
- N11/M11 upgrade

Old Connaught is identified as a “key development area” for retail in the Strategy for Centres in the DLR Retail Hierarchy, which includes the development of sustainable mixed-used urban villages in accordance with approved LAPs.

Appendix 14 to the County Development Plan includes the **Green Infrastructure Strategy** for the County. The key features of a spatial framework for Green Infrastructure in Dún Laoghaire-Rathdown are:

- A higher level, County-wide network of integrated elements, which connects to surrounding and Regional GI networks.
- A structure for integrating the rich network of local-level GI in Dún Laoghaire-Rathdown.
- A network of overlapping and multi-functional GI corridors, connecting higher-level GI hubs and the main elements of the mountains, the urban area and the coast.
- Integration of important regional GI corridors, such as the East Coast Trail route, and the Dublin and Wicklow Mountain Ways
- A ‘chain’ of improved ‘gateway hubs’ (major parks and gardens), which provide the transition between the mountains and the urban area. These gateway parks are shown in Figure A-6 at right.

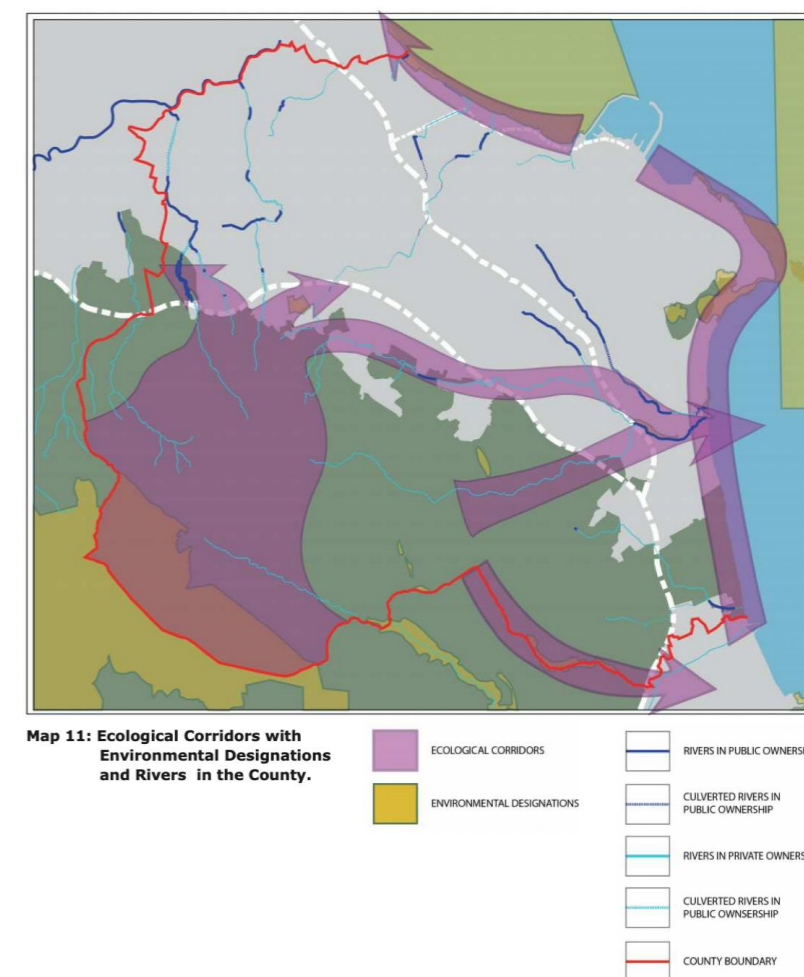


Figure A-5: Ecological Corridors with Environmental Designations and Rivers in the County

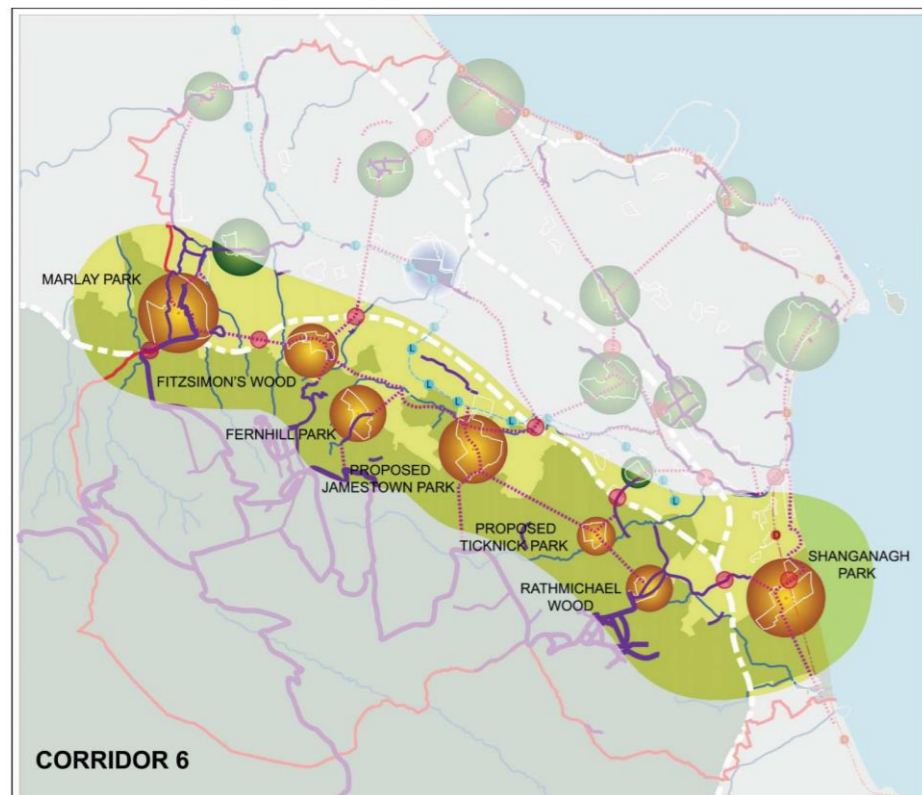


Figure A-6: Corridor 6 – Gateway Parks

These enhanced parks and links act as a transition between the rural and urban landscapes. The transitional or Gateway Parks are to provide access points to and from the mountains and open space above the urban area of the County. Linkages to other main GI corridors also ensure that sustainable travel options are available for those who want to venture beyond the ‘park’ environment not only from within the County, but from a wider regional catchment. These gateway parks will have formal and informal spaces, less managed but habitat rich areas and then access onto the mountains for those who are prepared for a longer recreational activity.

An emphasis is also placed on restoration and mitigation of ecological corridor fragmentation throughout the county. New developments should enhance the Green Infrastructure network and reinforce the multifunctional uses of these green corridors.

A.1.4.2 Wicklow County Development Plan 2022-2028

Fassaroe to the south of Old Connaught has been identified as a strategic site within the Town of Bray. It’s classified as a Level 4 Neighbourhood/Local Centre – Small Towns and Villages. The improvements identified to support the full build-out of Fassaroe also support the build-out of Old Connaught:

- a. N11 Cycle and Pedestrian Bridge
- b. N11/M11 Junction 4 to 14 Improvement Scheme
- c. Delivery of Wicklow County Council Part 8 N11 capacity and safety upgrades, as approved

- d. Busway from Fassaroe to Old Connaught over County Brook at Ballyman Glen
- e. Traffic Management Measures at Fassaroe Interchange to protect strategic function of the N/M11
- f. Commitment to the phased introduction of bus and enhanced rail services in line with increased demand

Policy Objectives Applicable to Rathmichael/Old Connaught Development:

- RPO 4.4: To support ongoing investment in public transport infrastructure, including the appraisal, planning and design of the LUAS extension to Bray. The development of Bray-Fassaroe should be undertaken in collaboration between Wicklow County Council, Dún Laoghaire-Rathdown County Council and the transport agencies to ensure the delivery of enabling transportation infrastructure and services.
- CPO 12.65: To continue to work with Dún Laoghaire-Rathdown County Council, and the transport agencies to facilitate the delivery of key enabling infrastructure required to develop the two strategic sites in Bray, especially for the westward extension of the town to Fassaroe, including Bray-Fassaroe public transport links and road improvements and the development of an amenity and active travel walking and cycling route between the Bray Harbour area northwards to the Dún Laoghaire-Rathdown administrative area to provide for future connection to the proposed Woodbrook DART station.

A.1.4.3 Woodbrook - Shanganagh LAP 2017-2023

The Woodbrook – Shanganagh LAP covers the area directly adjacent to the two LAP areas to the east of the N11. The LAP area has the potential to deliver 1,600-2,300 new homes across 31 ha of residential lands.

The LAP plans for a new DART station at Woodbrook, which is just over 1 km east of the from Old Connaught area boundary. The plan also identifies a future pedestrian/cycle route over the N11 at Allies River Rd, providing a sustainable connection between Old Connaught and the Woodbrook – Shanganagh area. This connection will allow safer access to the DART from Old Connaught, as well as access to the proposed Luas extension from Woodbrook – Shanganagh.

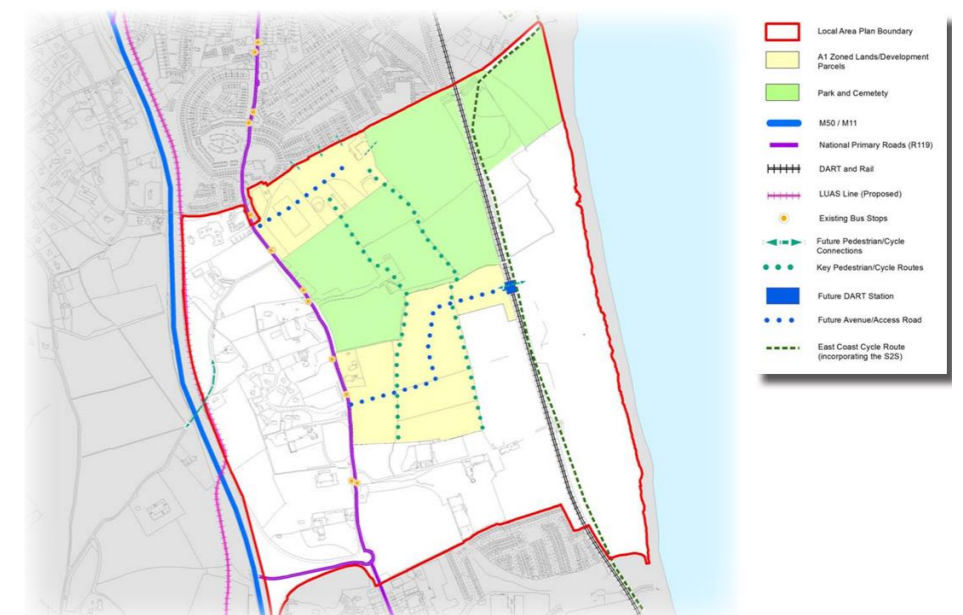


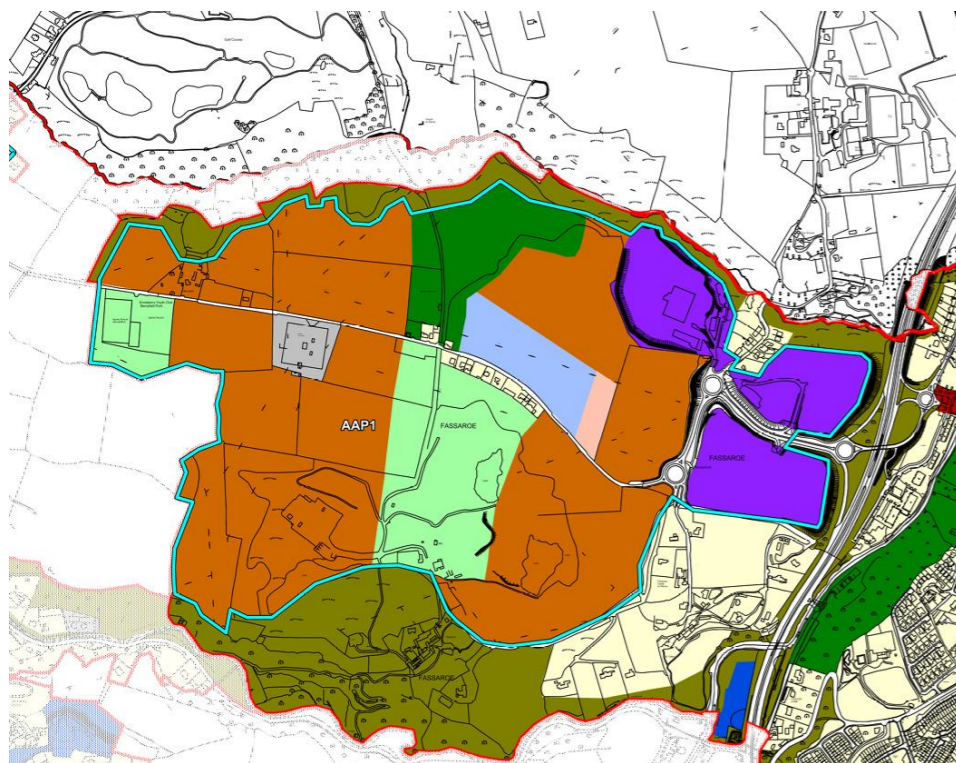
Figure A-7: Woodbrook-Shanganagh LAP Movement Strategy

A.1.4.4 Bray Municipal District LAP 2018-2024

The majority of lands in the Town of Bray are “built out” and very few greenfield, brownfield, or vacant sites remain. The plan provides that 35% of all new housing is targeted to occur within the historical town boundaries, including 1,000 units on the former Bray golf club. The development of a major new centre at Fassaroe (bordering Old Connaught) west of the M11, targeted to be developed as a mixed residential, open space, community and employment area will have the potential to meet up to 60% of Bray’s new housing need.

RO 4: With respect to the major development area of Fassaroe, west of the N11 (Action Area 1):

- a. The development of this area shall include the provision of an access road from the N11 to Ballyman Road; the scale of such a route shall reflect its primary function as a service road for a new neighbourhood, rather than that of a ‘by-pass’; the design and location of this route shall not affect the functionality of the major open space as a single park and an innovative design solution where park crossing is necessary will be required; access to the lands zoned for new residential in SLO-10 at Monastery shall be from Ballyman Road and any access road shall be designed to form an element of the future Fassaroe – Monastery link road.
- b. Provision shall be made (unless necessity for same has been definitely ruled out by the transport agencies) for a north – south link route from the new distributor road to cross Ballyman Glen and continue into County Dublin and link up with old Conna Avenue. The nature and function of this link i.e. the type of traffic it will carry (vehicles / pedestrian / cyclist / light rail) shall be determined at application stage, following consultation with the transport agencies and the neighbouring local authority.



ZONING LEGEND			
	Municipal District Boundary		TC Town Centre
	Settlement Boundary		NC Neighbourhood Centre
	RE Existing Residential		LSS Local Shops & Services
	R-HD New Residential		MU Mixed Use
	R20 New Residential		E1 Employment
	R15 New Residential		E3 Retail Warehousing
	R10 New Residential		E Special Employment
	R Special New Residential		FI Film Industry
	AOS Active Open Space		OS1 Open Space
	OS2 Open Space		SF Bray Seafront
	PU Public Utility		CE Community & Education
	GTH Bray Gateway & Transport Hub		KD Kilrudeary Demesne Conservation & Tourism Zone
	Conservation Area		T Tourism

Figure A-8: Fassaroe Land Use Zoning Map

A.1.4.5 Ballyogan & Environs LAP 2019-2025

The Ballyogan & Environs area is approximately 2km northwest of the Rathmichael LAP area. It is the largest LAP area in the county, and has 74 hectares of undeveloped land zoned “A – To protect and/or improve residential amenity”, allowing the population of the area to approximately double.

Stepaside and Carrickmines are identified as new neighbourhood centres, which may be destinations for residents of the two LAP areas for shopping, services, and employment.

Enabling transport infrastructure in this LAP area focuses on walking and cycling feeder networks to public transport, neighbourhood centres, schools and community facilities, as well as improved connections across the M50. Public transport services through the LAP area are also a focus. The following new links to surrounding areas are proposed:

- 25: Kiltiernan Link Road crossing the M50 and connecting Carrickmines Quarter to Cherrywood
- 27: Golf Lane Link connecting the Ballyogan Stream greenway to the Kiltiernan Link Road

A.1.4.6 Kiltiernan-Glenamuck LAP 2018-2023

The Kiltiernan-Glenamuck LAP area is located approximately 2.5 km northwest of the Rathmichael LAP area. Development of 2600-3000 units is anticipated in the Kiltiernan-Glenamuck LAP area.

The area will be unlocked for development via the Glenamuck District Distributer Road (GDDR) and Glenamuck Link Distributer Roads (GLDR), and public transport improvements focused on accessing the Luas and areas to the northeast of the site.

A.1.4.7 Cherrywood SDZ

The Cherrywood SDZ area is located directly north of the Rathmichael LAP area. It currently contains a large amount of residential and employment developments, with additional retail, residential and employment developments planned or under construction. Cherrywood’s employment and retail centres as well as Luas stops will be significant destinations for residents of the two LAP areas.

Three active travel links are proposed in this scheme connecting Cherrywood (and the Brides Glen Luas stop) to the Rathmichael LAP area along Brides Glen Rd, with one connection being made over the Cherrywood Viaduct with further connection to the Dublin Road at the roundabout with the M11. The Kiltiernan Link Road crossing the M50 is included in this plan as well.

A.1.4.8 Biodiversity Action Plan DLRCC 2021-2025

DLR County Biodiversity Action Plan 2021-2025 sets out five themes and associated objectives to support protection, recovery, restoration and reconnection of nature. Each theme lists out actions that should be implemented to meet these targets and objectives.

Theme	Objective
1. Reaching a deeper understanding of our county’s biodiversity focuses on data collection and understanding of the baseline.	Strengthen the knowledge base for conservation, management, and sustainable use of biodiversity and includes actions such as gathering, identifying, assessing, and mapping information on county’s biodiversity.
2. Making good decisions for biodiversity emphasises the need to integrate biodiversity into decision making. It highlights the need for development of tools and guidance for all staff and decision makers.	Mainstream Biodiversity into decision-making and improve the management of this valuable resource. Actions listed under this objective include development of management guidelines, Local Area Plans, Policies, as well as guidance documents for natural assets.
3. Powerful actions to protect biodiversity focuses on strengthening ecosystem services and natural capital as well as understanding their value. It focuses on	Conserve and restore biodiversity and ecosystems, and support ecosystem services in DLR, including coastal and marine. Actions include identification of ecosystem services, strengthening of understanding of natural capital and ecosystem

Old Connaught & Rathmichael ICAS

Part 1 - Baseline Report

Theme	Objective
establishing areas for improvement.	services, development, and implementation of re-wilding projects as well as surveying and assessing of existing habitats.
4. Connecting people and nature and inspire a positive future highlights the need for raising awareness about biodiversity and ecosystem services.	Increase awareness, training and appreciation of biodiversity, ecosystems and ecosystem services ensures actions to establish necessary training, programmes, and activities for communities to educate about biodiversity.
5. Strength in working together emphasises the importance of community engagement.	Strengthen the effectiveness of collaboration between all stakeholders for the conservation of biodiversity, including Local Communities, Local Authority Biodiversity Officers, LAWPRO, the National Biodiversity Data Centre, BirdWatch Ireland, NPWS, and other State Bodies.

A.1.5 Relevant Projects and Studies

A.1.5.1 Bray and Environs Transport Study 2019

This Study commits to the Woodbrook DART Station, Luas Line B2 extension from Bride’s Glen to Bray town centre and Park and Ride facilities. A Luas/ DART/Bus Interchange at Bray Station is proposed and a commitment to the phased introduction of bus services in line with increased demand is highlighted.

It provides for the Bray CBC on Dublin Road M11/ N11. Furthermore, the Study identifies a busway link between Fassaroe and Old Connaught, which will involve the construction of a vehicular bridge across the County Brook, and this busway route will also link with the future Woodbrook DART station, possibly via a new road link across the M11. It considers a feeder Bus from Metro at Sandyford via N11, Cherrywood and Rathmichael to Bray DART Station. It identifies the need for improvements to the pedestrian and cycle network in the study area. The Study provides the following recommendations regarding the local road network to serve Old Connaught:

1. Upgrade of Ferndale Road;
2. Development of new road link from Ferndale Road to Dublin Road;
3. Cherrywood to Rathmichael link road.

A.1.5.2 Greater Dublin Area Transport Studies Bray and Environs 2021

The Study set out a long list of 12 options to serve demand in the study area. 10 options were subsequently brought forward for further analysis. The Study commits to the following measures which are applicable to the Old Connaught and Rathmichael LAP areas:

- Luas Green Line extension to Bray town centre;
- P&R facilities and associated DART station at Woodbrook;
- Bray Core Bus Corridor Dublin Rd/M11-N11;
- Busway from Fassaroe to Old Connaught over the County Brook at Ballyman Glen (to also facilitate walking & cycling);
- Metro South to Cherrywood;
- N11/M11 Junction 4 to 14 improvement scheme;
- GDA Cycle Network Plan improvements.

The Study also highlights the requirement of the early phases of development in the Old Connaught area being served by interim bus measures (from Sandyford via Rathmichael and Old Connaught to Bray DART Station) until the Luas Green Line extension to Bray is suitably advanced. It seeks increased bus service capacity along R119 through Shankill and north of Bray and bus services to developments west of N11.

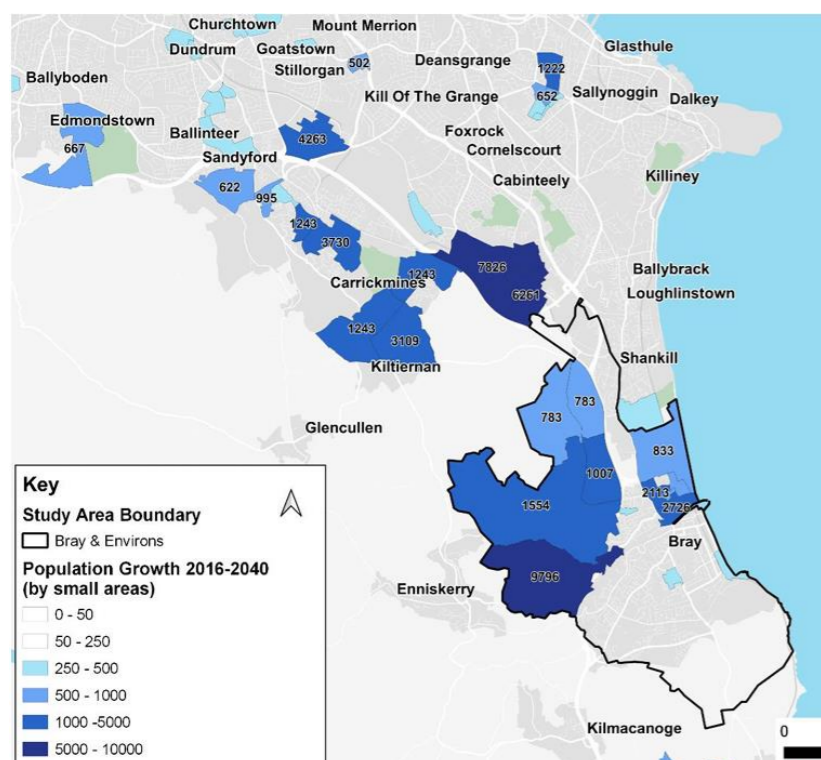


Figure A-9: Population Growth 2016-2040 by small areas

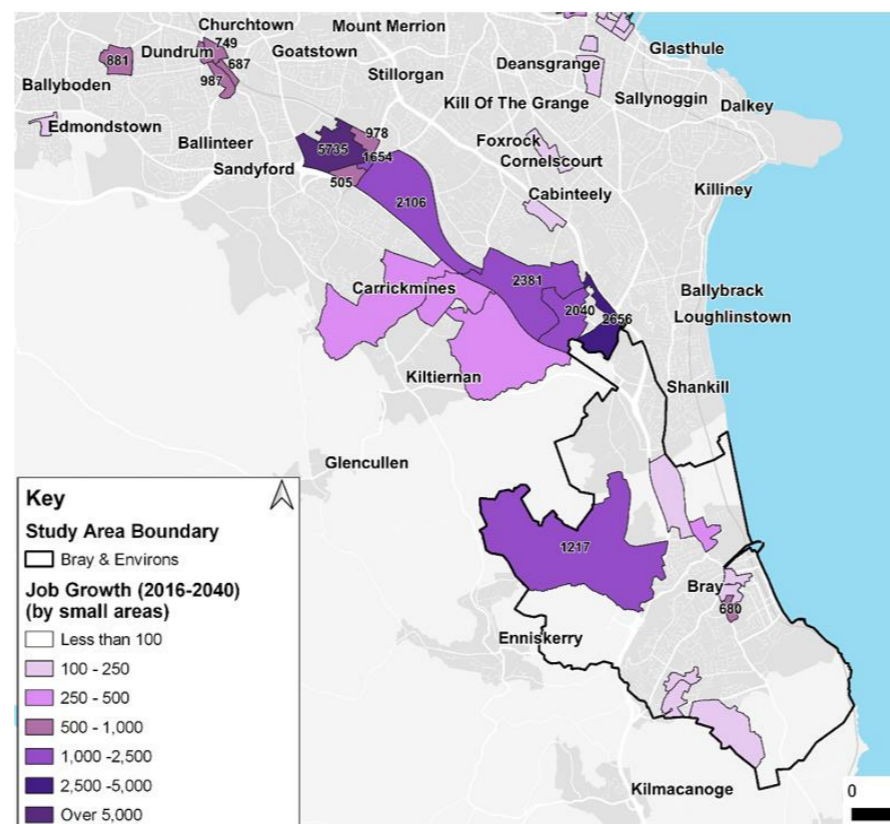


Figure A-10: Job Growth 2016-2040 by small areas

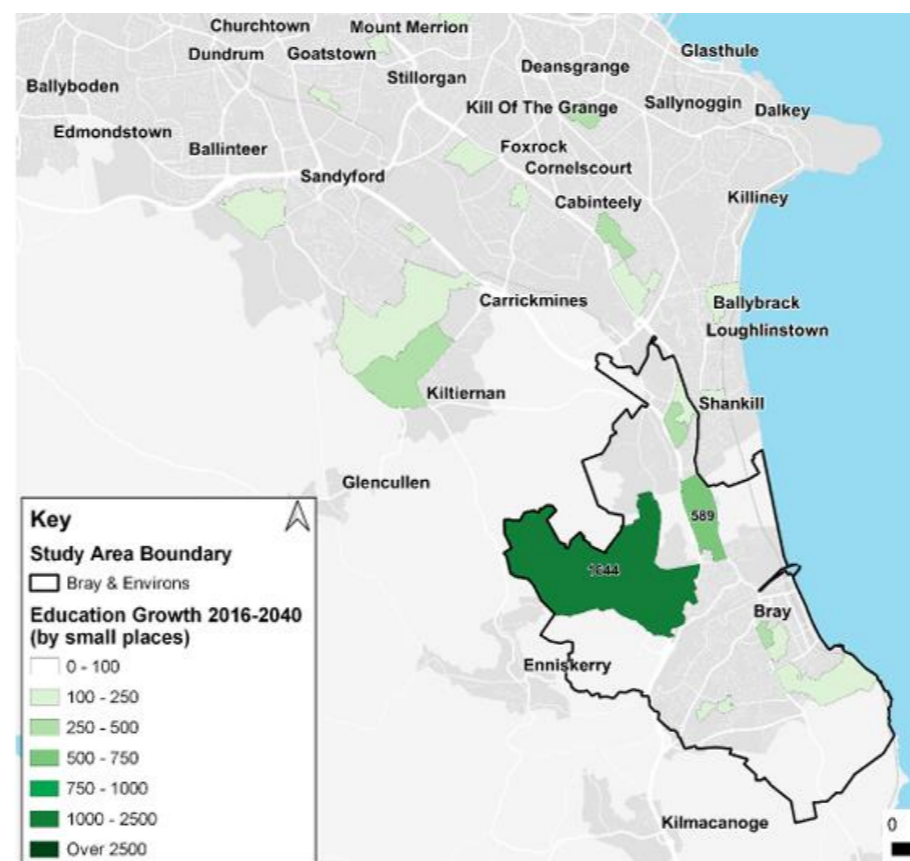


Figure A-11: Education Growth 2016-2040 by small areas

A.1.5.3 Fassaroe Masterplan / Fassaroe Phase 1 SHD Development

Phase 1 of the development at Fassaroe has been submitted for planning approval and is currently awaiting a decision from An Bord Pleanála. Phase 1 includes a road link between the N11 and Ballyman Road, 650 residential units, parks, a creche, a neighbourhood retail centre and associated enabling infrastructure. Phase 1 also includes provisions for public bus services to support demand towards Bray and Brides Glen.

Opportunities exist to integrate public transport services and the active travel network with accelerated development and facilities at Fassaroe as the two LAP area plans progress.

A.1.5.4 M11/N11 Corridor Study Needs Assessment Report 2017

Transport Infrastructure Ireland’s (TII) ‘M11/N11 Corridor Study Needs Assessment Report’ undertaken in 2017 assessed both the future needs of the M11/ N11 National Road corridor between Junction 4 (M50/M11) and Junction 14 (Coyne’s Cross), and the necessary improvements to the Regional and Local Road network required to support and complement the M11/N11 corridor. The N11/M11 Bus Priority Interim Scheme has been introduced to provide interventions in the short term and is described further overleaf. This Study proposed improved junctions and upgrading of the M11 to three lanes in sections, in order to increase the overall capacity of the M11/ N11 and to ease traffic congestion – particularly during the evening peak. The Study’s short-term plans do not include any improvements to Ferndale Road, Thornhill Road or Rathmichael Road (to the north of the LAP lands).

A.1.5.5 N11/M11 Bus Priority Interim Scheme

The N11/M11 Bus Priority Interim Scheme proposes north- and south-bound bus lanes on the N11/M11 between the Loughlinstown roundabout and Junction 8, which may be accessible from Old Connaught and Rathmichael.

A.1.6 Design Standards and Guidelines

As part of the implementation of the proposed infrastructure measures, a number of design standards and guidelines should be followed.

These include but are not limited to the following:

- Design Manual for Urban Roads and Streets (DMURS)
- National Cycle Manual
- Safe Routes to School Design Guide
- Design Manual for Roads and Bridges (DMRB)
- Rural Cycleway Design (Offline and Greenways)
- The Treatment of Transition Zones to Towns and Villages on National Roads
- Design Phase Procedure for Road Safety Improvement Schemes, Urban Renewal Schemes and Local Improvement Schemes
- Design Guidelines for the Creation of Public Transport Information