

Dun Laoghaire-Rathdown County Council

## Infrastructure Capacity Assessment Study for Old Connaught and Rathmichael LAP areas

Part 2 - Position Report



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.

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# 1. Introduction

Arup was commissioned by Dún Laoghaire-Rathdown County Council (DLRCC or “the County”) to complete a high-level strategic Infrastructural Capacity Assessment Study (ICAS) to inform 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 development infrastructure 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.

# 2. Purpose

The purpose of this Position Report is to outline key considerations from the Baseline Analysis which will be used to develop principles and objectives for the ICAS and to provide the basis for a high-level settlement strategy. The study methodology is shown in Figure 2-1 to provide context. This report therefore commences with a summary of the Baseline Analysis by considering general policy, land use and spatial planning, environmental considerations, parks, open spaces, green infrastructure and landscape, transport, water, wastewater and flooding and utilities. From this, a set of development principles is identified which informs the identification of study objectives. Finally, a high-level settlement strategy is proposed to guide the provision of required infrastructure as the ICAS process progresses.

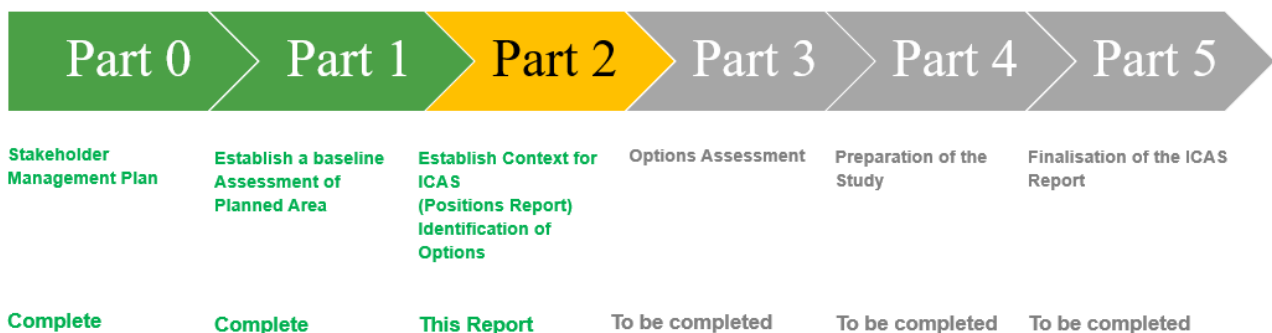


Figure 2-1: Study Methodology

# 3. Baseline Summary

Part 1 of the ICAS included a detailed baseline assessment of the two LAP areas and also identified the opportunities and constraints. This section of the report provides a summary of these findings to inform and shape the following steps in the ICAS, more detail can be found in the Baseline Report.

## 3.1 Policy Documentation

### 3.1.1 National Policy

The provision of infrastructure to support development is guided by policy documents on national, regional and local level. Project Ireland 2040: National Planning Framework (NPF) highlights the need to develop local planning, connectivity and wellbeing policies and advocates for integrated land use and transport planning and self-sustaining economic and employment-based development to support accelerated housing delivery.

The National Development Plan 2021 to 2030 (NDP) promotes future development to be provided within existing urban area footprints and ensure that land use and transportation are spatially and impactfully integrated, which is also encouraged by the National Sustainable Mobility Policy.

The Climate Action Plan 2023 (CAP) sets ambitious targets for public transport and active travel journeys and has major focus on improving building standards with the aim to reduce national transport emissions and zero energy in buildings by 2030.

The National Investment Framework for Transport in Ireland (NIFTI) supports CAP by supporting goals to prioritise walking and cycling followed by public transport and private vehicles and puts emphasis on the utilisation and optimisation of existing infrastructure over new infrastructure.

### 3.1.2 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. It classifies Bray as a Key Metropolitan Town, which includes the Old Connaught LAP and Fassaroe areas which are targeted for new housing, employment and community facilities. The RSES also includes a Metropolitan Area Strategic Plan (MASP), identifying Bray – Fassaroe (which includes Old Connaught) in a North-South Strategic Development Corridor.

The Greater Dublin Area (GDA) Transport Strategy 2022-2042 encourages transit-oriented development and dense, mixed-use neighbourhoods in the GDA and advocates the “Decide and Provide” method of transport investment. It furthermore promotes the 10-minute neighbourhood concept and the road user hierarchy that places walking and cycling as the highest priority followed by public transport and private car travel.

### 3.1.3 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 is guided by five objectives aligning with national and regional policy including the creation of a County that is climate resilient, compact and connected, comprise of liveable towns and villages, is inclusive and healthy and is economically vibrant.

The DLR CDP has a set specific objective for the two LAP areas which includes the delivery of enabling infrastructure which was unpacked in the 2019 and 2021 Bray and Environs Transport Studies. The DLR CPD also includes a Green Infrastructure Strategy with a network of integrated green infrastructure that identifies a chain of gateway hubs (parks and gardens) to provide access between the DLRCC urban areas and the Dublin Mountains. Rathmichael Wood is one of these gateway hubs.

The DLR CDP identifies specific policy objectives applicable to Rathmichael and Old Connaught areas centred around having to prepare Local Area Plans, providing new pedestrian and cycle bridges, actively support sustainable transport modes, delivering enabling transport infrastructure and facilitating the extension of Luas and Metrolink. There are also specific road objectives identified within the vicinity of the LAP areas and the challenge is how infrastructure between Dun Laoghaire-Rathdown and surrounding areas are coordinated and linked.

## 3.2 Land Use and Spatial Planning

### 3.2.1 Land Use and Spatial Planning Policy

The DLR CDP identifies Old Connaught and Rathmichael LAP areas as new residential communities, while the RSES identified Old Connaught for the westward future expansion of Bray, which is also supported by MASP. Neither of the two LAP areas are currently serviced and have been designated as Tier 2 lands meaning that the land is considered serviceable within the lifetime of the DLR CDP.

### 3.2.2 Proposed Housing Provision and Zoning

The planned residential capacity for Old Connaught LAP area and Rathmichael LAP area up to 2028 is 2,005 and 2,431 respectively and an additional strategic land reserve (SLR) has been identified for further

residential development beyond 2028. However, a significant proportion of this SLR encompasses zoned greenbelt land which needs to be taken into consideration as part of any plans for future expansion.

There are a number of sites within the two LAP areas in the ownership of DLRCC and have been identified as potential sites for development of social housing including Old Connaught Avenue, Ballyman and three sites in Rathmichael.

Other considerations include the Specific Local Objective (SLO) #92 in the CDP which states that it is an objective “That no insensitive or largescale development will take place above the 90 - metre contour line”. This objective impacts on the northwestern corner of Rathmichael, from Old Connaught Golf Course to Pucks Castle Lane.

### 3.2.3 Surrounding Development Areas

There are five significant designated development lands within the vicinity of the two LAP areas including the Cherrywood SDZ, Woodbrook LAP, Ballyogan and Environs LAP (BELAP), Kiltiernan / Glenamuck LAP and Fassaroe. Connectivity and sustainable transport options between these development areas, which vary in their current stages of planning and construction, will be important to ensure integrated land use and transport planning in the County.

### 3.2.4 Characteristics of LAP Areas

Both LAP areas currently exhibit low population density, currently less than 1,000 persons per square kilometre. This stands in stark contrast to the areas immediately to the east across the M11, where population densities currently exceed 10,000 persons per square kilometre.

Despite the limited allocation of employment uses, both LAP areas are situated next to employment hubs; namely Bray, Cherrywood, Carrickmines, and Sandyford. Rathmichael, in particular, borders Cherrywood, which is expected to witness a substantial increase in employment opportunities as the SDZ Planning Scheme continues to be delivered.

Regarding social infrastructure, Rathmichael features a medical facility, a place of worship and a second level education facility, the John Scottus School. Old Connaught features a place of worship, St Gerard’s Primary and Post Primary Schools and St Kieran’s Special School. For additional education choices, as well as access to retail and leisure facilities, residents in both LAP areas have the option of utilising facilities in Shankill to the northeast or Bray to the south and further afield at Cherrywood, Cabinteely and Enniskerry.

### 3.2.5 Opportunities and Constraints

#### Opportunities

There is an opportunity to link the LAP areas to the employment provided in Cherrywood and Bray in particular and also to connect to the social and community infrastructure in the immediate surrounding areas of each LAP. The current low-density development in the Rathmichael LAP area in particular creates a sub-urban environment that will prove difficult to develop in line with our sustainable development and compact growth ambitions.

There are opportunities to improve connections to the existing (and future planned) public transport services operating to the east of the N11 through improved walking and cycling facilities and connecting public transport services.

#### Constraints

Currently the LAP areas contain limited employment opportunities which means that there are a lot of longer distance trips made to places of work outside the LAP areas, with very limited public transport alternatives.

Topography towards the west does impact on the potential for development both in terms of viability of development on steep slopes but also in terms of development restrictions above the 90m contour line.

### 3.3 Environmental Considerations

#### 3.3.1 Biodiversity

The two LAP areas consist of improved agricultural grasslands, open spaces/fields demarcated by hedgerows and various residential, commercial and recreational developments. Extensive hedgerows are present along the boundary fences of the open spaces/fields, which have the potential to have ecological value and provide ecological corridors. There are also areas of mature woodlands.

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. The River Dargle is located in close proximity (~150metres) to the south-eastern boundary of the Old Connaught LAP area and is a protected river designated in the Salmonid Regulations.

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.

#### 3.3.2 Record of Monuments

Within the two LAP areas there are 42 recorded monuments listed on the Sites and Monuments Register (SMR) and 13 features on the Record of Monuments and Places (RMP). Approximately 41 structures or groups of structures of architectural heritage significance have also been identified in addition to five industrial heritage sites.

#### 3.3.3 Waterbodies

The Shanganagh River (IE\_EA\_10S010600) flows northeast along the north boundary of the Rathmichael LAP and drains into the Irish Sea at Killiney Bay. It has a Water Framework Directive (WFD) River Waterbody Status 2016-2021 of “Good” and a River Waterbody Risk Status of “Not at Risk”.

The Crinken Stream (IE\_EA\_10D010300 and IE\_EA\_10D010250) passes through the two LAP areas and has a tributary which flows southeast of the Old Connaught LAP boundary, both of which drain into the Irish Sea. They both have a River Waterbody WFD Status 2016-2021 of “Good” and a River Waterbody Risk Status of “Not at Risk”.

#### 3.3.4 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 Enniskerry Gravel, which is a smaller part of the two LAP areas to the south, has a status of “Not at Risk.”. The WFD defines “At Risk” waterbodies as those which “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).

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 following groundwater dependant Annex 1 habitats (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.

#### 3.3.5 Air Quality and Noise

The two LAP areas are located within sub-area A (Dublin) which is defined as an area with air quality within the EU air quality limits, except for NOx which exceeds its Air Quality Standard for the protection of vegetation in 2019. There is 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 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.

### 3.3.6 Opportunities and Constraints

#### Opportunities

There are opportunities to incorporate archaeological and architectural heritage features appropriately within potential developments in the LAP areas and to ensure biodiversity gains and enhancements are achieved. This will include the avoidance and minimising of ecological impacts, integration of green resources and management and focussing on key themes such as health, culture and conservation. Key to this will be the Ecosystem Services Approach (ESA) which is promoted and encouraged as a strategy for integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. There are also opportunities to incorporate watercourses into the future urban environment.

#### Constraints

If not carefully considered there are potential impacts on recreational use and public amenities, on recorded monuments, on structures of groups of structures of architectural heritage significance and on the Ballyman Glen SAC, the Ballyman Glen pNHA and the Loughlinswood pNHA. There may be further impacts on hedgerows, mature trees and woodlands, groundwater, water bodies and air quality.

## 3.4 Parks and Open Spaces, Green Infrastructure, Biodiversity and Landscape

### 3.4.1 Parks, Open Space, Heritage and Conservation

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 at Festina Lente 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.

### 3.4.2 Green Infrastructure

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 and SVS FC pitches, which are located behind St. Columille'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.



### 3.4.3 Cultural Heritage

A strong theme of cultural heritage elements further harness and reinforce the existing landscape character, some of which are hidden and underutilized. There is an opportunity to potentially integrate these cultural heritage assets as part of public open space. These elements can serve as attractions, create focal points in the landscape, and celebrate the cultural heritage of Rathmichael and Old Connaught.

### 3.4.4 Opportunities and Constraints

#### Opportunities

There is opportunity to celebrate the natural and cultural heritage values in the area through considered design and to harness and reinforce the landscape character. There is also opportunity to provide new high quality public open spaces, providing both passive and active amenity while also providing for ecological connections within the LAP areas and to connect them to key destinations.

Ecological connectivity across the landscape can be maintained and protected while key views to surrounding natural landmarks are captured and framed. Multifunctional green connections can be created and agricultural land can be used to provide green connections to areas of interest, delivering SUDs, biodiversity and public open spaces. In addition, nature-based solutions, amenity and ecological diversity can be created by constructing wetlands in food risk areas.

#### Constraints

Current constraints include minimal access to public open spaces, council managed parks and there are no playgrounds within the two LAP areas. The M11/N11 limits access to public open spaces. Maintaining existing hedgerows and trees which are mature vegetation while accommodating new development will be challenging. New development will also typically be associated with linear infrastructure (roads and active travel routes) which potentially can impact existing vegetation and may have a visual impact. Due to topographical vantage points, there are a number of protected views that needs to be maintained.

## 3.5 Transportation

### 3.5.1 Introduction

The current low development density of the two LAP areas and the long distance from community facilities, amenities and public transport makes residents living within these areas highly car dependent. 68% of all trips to work, school and college are by car and car ownership is 98% for the two LAP areas. Both of these statistics are higher than that of DLRCC average.

### 3.5.2 Walking

The availability of footpaths within the LAP areas are limited and roads are narrow, which may deter residents to make journeys on foot. The majority of the existing community services within close proximity to the two LAP areas are located to the east of the M11/N11 and M50 and there is limited pedestrian connectivity to encourage walking to these services. This is reflected in the 2016 CSO mode share data, which is the latest information on modal split available that shows that only 3% of residents in the two LAP areas combined walk to work, school, and college.

### 3.5.3 Cycling

Similar to the pedestrian network, the existing cycling network is limited within the two LAP areas, with cyclists only being able to use the existing, narrow roads that have no provision of cycle lanes. Although there are a lot of employment, social and community facilities within a 10-minute catchment to the two LAP areas, there are limited connections across the M11/N11 and the M50. Cycling only represented 1% of trips to work, school and college in the 2016 CSO mode share data.

### 3.5.4 Bus

The two LAP areas are currently not serviced by public transport. The nearest services all run to the east of the LAP areas, along Dublin Road. Bus mode share in 2016 accounts to 9% of the trips to work, school and college. 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. 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.

### 3.5.5 Rail

The two LAP areas are within close proximity to rail services which includes:

- DART – Greystones – Howth / Malahide services that stops in Shankill, Bray and the planned new station in Woodbrook; and
- Luas – Green Line that currently terminates at Brides Glen, with future plans to be extended to the south.

Rail mode share in 2016 accounts to 8% of the trips to work, school and college.

### 3.5.6 Road

The M11/N11 and the M50 are national roads that segregates the two LAP areas from the sub-urban built-up area to the east and bisects the northern part of the Rathmichael LAP. The R116 from Kilternan lies to the north of the Rathmichael LAP, and links to Cherrywood and Shankill. Local roads include Ballyman Road, Ferndale Road, Old Connaught Avenue and Thornhill Road, as well as undefined/residential-style roads. The majority of the major road junctions within the LAP areas have limited safe crossing facilities for pedestrians and cyclists.

The busiest traffic volumes can be found on the M50 and M11/N11 followed by Dublin Road which runs north south through the eastern built-up areas of Ballybrack, Shankill and Bray. This road is a key route for traffic to enter and exit the N11/M11. Traffic volumes are relatively low within the two LAP areas. Old Connaught Avenue is key route linking the areas to the west of the M11/N11 to the east; it has two-way traffic volumes with approximately 650 vehicles in the AM peak and 400 vehicles in the PM peak. There is a total of seven vehicular bridges (with some pedestrian infrastructure) and three pedestrian/cycle crossings across the M50 and M11/N11.

### 3.5.7 Opportunities and Constraints

#### Opportunities

The LAP areas are largely undeveloped and offers opportunity to establish new active travel connections within the LAP areas and to built-up areas adjacent. Footpaths can be provided along key roads and existing walking trails and other green infrastructure within the LAPs. A well-developed active travel network will support trips to school on foot, to provide pedestrian safety and to provide linkages to local social and amenity facilities available and to provide access to places of employment nearby including Cherrywood and Bray.

The cycling catchment from the two LAP areas provides opportunity for more social and economic services to be within the reach of a short journey, given that a safe and attractive network and infrastructure for all ages and abilities is established.

There is potential to expand existing bus services into the two LAP areas and to connect these areas to the high-quality bus services available to the built up areas to the east of M11/N11. This could include active travel connections to bus stops along Dublin Road but also to provide connections to existing and proposed Dart stations and to the planned Luas service which is expected to run north south to the east of the LAP areas.

The road network can be investigated to provide improved connection to the N11 and M11/N11, however the possible implications on car mode split should be carefully considered. There is opportunity to extend the existing road network and to optimise its use. New roads will be required to provide access and collector roads for new neighbourhoods. The new roads will also provide the opportunity for new or upgraded drainage network serving the LAP areas.

#### Constraints

Walking and cycling is currently limited by the lack of infrastructure, unsafe crossings, lack of connections and large barriers such as the M11/ N11 and the Allies River. There is an overall lack of permeability making walking and cycling distances long and unattractive. Walking and cycling is further hindered by the steep topography within some of the LAP areas.

There are currently no bus services within the area and bus stops in adjacent areas are inaccessible due to the lack of permeability. DART and Luas stops are also inaccessible for large parts of the LAP areas on foot or by cycle due to the lack of permeability and will remain so if not addressed.

Widening of existing roads will be challenging considering existing hedgerows and trees for which the objective is to preserve and providing new roads will also be affected by these features.

## 3.6 Water, Drainage, Flood Risk & Utilities

### 3.6.1 Water Infrastructure

Water infrastructure is available in both LAP areas and existing residential estates are already connected to water supply. All available lands within the LAP areas are located close enough to the existing water supply networks to be connected. The LAP areas are connected by the Roundwood Water Treatment Works. There are however existing water supply capacity limitations in the LAP areas and surrounding areas, but this constraint will be addressed by the delivery of the Old Connaught-Woodbrook Water Supply Scheme expected to be completed by the end of 2024.

### 3.6.2 Wastewater Infrastructure

The availability of wastewater infrastructure within the two LAP areas is limited. While there are some wastewater infrastructure connections in the Rathmichael LAP area serving existing residential estates, there

are no wastewater connections in the Old Connaught LAP area altogether and existing land uses are dependent on septic tanks.

Wastewater networks are available serving the built-up areas to the east of the two LAP areas. The challenge in connecting to these wastewater networks is the M11/N11 that needs to be crossed by new connection lines. Uisce Éireann has initiated the drafting of a strategic asset plan to connect the two LAP areas to the existing wastewater networks to the east of the M11 motorway, and have confirmed that sufficient capacity will be available in the existing networks to serve development within the two LAP areas.

To serve the Rathmichael LAP a rising main crossing at Crinken Lane or a trenchless crossing under the M11/N11 is proposed while at Old Connaught LAP area a new trunk sewer is expected to run along Old Connaught Avenue which would require a rising main across the M11. Connection options across the M11 are currently being considered by Uisce Éireann (UÉ), who are in discussions with Transport Infrastructure Ireland (TII).

### 3.6.3 Surface Water Infrastructure

There are well-developed surface water drainage systems already in place for both the LAP areas to serve the existing developments within these areas and these networks include watercourses and pipe crossings the M11/N11. To serve new development within the LAP areas, the existing network will be extended to cover areas of new development. Attenuated flows from new development will discharge to the existing watercourses and piped drainage networks subject to approval.

However, the main constraint for surface water management is groundwater vulnerability especially within the Rathmichael LAP area and where the Old Connaught LAP area borders Ballyman Glen, an SAC site which contains groundwater dependent terrestrial ecosystems is featured. Special precaution measures are required when introducing green infrastructure or discharging into streams.

### 3.6.4 Flood Risk

A strategic flood risk assessment (SFRA) was undertaken to identify the potential constraints related to flooding within the LAP areas in accordance with the requirements of The Planning System and Flood Risk Assessment Guidelines for Planning Authorities (2009).

The DLRCC County Development Plan 2022-2028 includes a Justification Test for Old Connaught which concluded that the test was passed; however, any new development will require a site-specific flood risk assessment (SSFRA) and Justification Test specific to the development, demonstrating the new development is not classified as highly vulnerable and located within Flood Zones A or B. New highly vulnerable developments adjacent to Flood Zones A or B must also ensure there is no loss of floodplain storage for the 1% AEP event and that residual risks and climate change risks are managed.

The CDP SFRA includes a Justification Test for Rathmichael which concluded that development within Flood Zones A and B should not be permitted because there are significant other lands available at a lower risk of flooding (Flood Zone C). The lands within Flood Zone A and B should be used for open space, amenity or water compatible uses only.

In some sub-zones of the LAP areas, the Catchment Flood Risk Assessment Management (CFRAM) maps are under review. In such areas, a SSFRA supplemented by a detailed hydraulic model is required to accurately determine the flood extents and depths. DLRCC must be satisfied with the information contained in the SSFRA before making decisions on planning applications where the existing Office of Public Works (OPW) flood maps are under review.

The risk of pluvial flooding is generally low. However, parts of the LAP areas are affected by pluvial flooding. It is recommended that an appropriate surface water drainage system including SuDS are implemented to manage the risk of pluvial flooding and a SSFRA addressing this risk must be prepared. The risk of groundwater flooding is considered low for both LAP areas.

### 3.6.5

#### 3.6.5 ESB and Telecommunication

Both electrical and telecoms infrastructure are available within the LAP areas. There are three zone substations supplies including Carrickmines, Cherrywood and Fassaroe zone substations. To accommodate new large-scale development ESB has indicated that network upgrades will be required for both LAP areas and a new 38kV substation would need to be established to provide the residential capacity.

In terms of telecommunications fibre connections are available within the surrounding areas to the LAP areas and new development can connect to these networks but will require new fibre cabinet capacity and applications for new connections would need to be submitted to the telecom's providers.

#### 3.6.6 Opportunities and Constraints

##### Opportunities

There is an opportunity to expand the potable water network in the two LAP areas and serve new development. Introducing and expanding the wastewater network within the LAP areas will reduce the use of septic tanks and therefore reduce the risk of groundwater contamination.

There is an opportunity to introduce green infrastructure on the surface water network and to improve stream water quality through filtering of surface water before discharge from roads.

There is an opportunity to incorporate SuDS features and permeable surfaces within new developments to improve water quality and manage surface water flood risk.

From an electrical connection point of view, both LAP areas are located within three zone substation locations, therefore capacity should be available following network upgrades for future development.

##### Constraints

Expanding the potable water network will require possible upgrades to meet future demand and the new network may be constrained by the hilly topography. New development is constrained until the Old Connaught-Woodbrook Water Supply Scheme is delivered.

New wastewater crossings of the M11/N11 will be required to serve new development and this will require collaboration between UÉ and TII. Topography in some areas within the LAP areas are not favourable to a gravity fed system; areas within the LAPs might require pumping.

In Rathmichael, no development within Flood Zone A or B is permitted. In Old Connaught, any new development will require a SSFRA and Justification Test specific to the development, demonstrating the new development is not classified as highly vulnerable and located within Flood Zones A or B. New developments must also ensure there is no loss of floodplain storage for the 1% AEP event and that residual risks and climate change risks are managed.

In areas where the OPW CFRAM maps are under review, a SSFRA supplemented by detailed hydraulic modelling is required. DL RCC must be satisfied with the information in the SSFRA before making decisions on planning applications.

Expanding the ESB network may require a new 38kV substation to meet requirements for a new residential development. New fibre extensions and fibre cabinets would also be needed for future residential development.

## 4. Proposed Principles and Objectives

### 4.1 Introduction

The objective of the Infrastructure Capacity Assessment (ICAS) for the Old Connaught and Rathmines LAP areas is to provide a high-level strategy outlining the infrastructure that would be required to create sustainable communities within the two LAP areas. The first step in developing this strategy is to review the existing context and infrastructure capacities within these areas, the policy context and planned infrastructure. This will provide a thorough understanding of the opportunities and constraints within these areas. This is followed by setting principles and objectives for the LAP areas. Infrastructure provision options are then provided and assessed to address expected needs and demand of the future communities living within the LAP areas. The options are then assessed to identify a preferred option / strategy. The preferred strategy is then refined by reviewing its likely development phasing and infrastructure requirements associated with each phase.

This chapter outlines the principles and objectives for the study to be used as a basis for the preparation of the transport and other strategic infrastructure options to inform the LAP areas. The principles and objectives are based on the information gathered in Part 1 of the study and is based on national, regional and local policies and objectives and the review of the existing and planned infrastructure and the identified opportunities and constraints identified. Key performance indicators are also defined which will be used to evaluate transportation and infrastructure options developed as part of Part 2B Options Development.

The study objectives identified are SMART (Specific, Measurable, Achievable, Realistic and Time-bound) and ensures accountability during the planning, design, appraisal, and implementation stages of the project. The objectives are aligned with underlying policies and strategies relevant to the strategic context of the project briefly outlined below in the following section.

### 4.2 Policy Context

On a national level the strategic context of the project includes the Project Ireland 2040: National Planning Framework (NPF), the National Development Plan 2021 – 2030 (NDP), the Climate Action Plan 2023 (CAP), the National Investment Framework for Transport in Ireland (NIFTI) and the National Sustainable Mobility Policy.

On a regional level, the strategic context includes the Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019 – 2031 (RSES) which also includes the Metropolitan Area Strategic Plan (MASP) and the Greater Dublin Area (GDA) Transport Strategy 2022 – 2042. Finally, the strategic context of the project is also informed on local level by the Dún Laoghaire-Rathdown Development Plan 2022 – 2028 (DLR CDP). Cognisance is also taken of development planning adjacent to the two LAP areas including the Fasseroe LAP, Ballyogan and Environs LAP (BELAP), Kiltiernan / Glenamuck LAP and the Shanganagh / Woodbrook LAP.

### 4.3 Development and Planning Principles

Within RSES, Bray has been identified as a ‘key town’ with the potential to accommodate commensurate levels of population and employment growth. The Old Connaught area is targeted for new housing, employment and community facilities as part of the growth in Bray. MASP has also identified Fasseroe (which includes Old Connaught) as part of the North-South DART Strategic Development Corridor. RSES outlines a number of key principles applicable to Rathmichael and Old Connaught which includes:

- Sustainable settlement patterns by better managing sustainable and compact growth;
- Regeneration of cities, towns and villages by making better use of under-utilised land and buildings in existing built-up areas;
- Integrated transport and land use by promoting the best use of existing and planned transport and the promotion of sustainable and active modes of travel;

- Sustainable management of water, waste and other environmental resources;
- Enhancement of green infrastructure by identifying, protecting and enhancing green infrastructure and promote biodiversity and natural heritage through coordinated spatial planning and conservation;
- To provide the opportunity to create a strong economy by promoting innovation and entrepreneurship; and
- Enhance strategic connectivity both regionally, nationally and internationally.

DLR CDP has zoned substantial lands within Rathmichael and Old Connaught LAP areas for residential A1 “to provide for new residential communities and sustainable neighbourhood infrastructure in accordance with local area plans”. The DLR CDP is made up of five strategic outcomes including:

- The creation of a climate resilient County;
- Creation of a compact and connected County;
- Creation of a network of liveable towns and villages;
- Creation of an inclusive and healthy County; and
- Creation of a vibrant economic County.

Many of the principles outlined in RSES therefore resonates with that of DLR CDP in terms of general themes including for example compact growth, integrated transport, strong / vibrant economy and liveability. These themes also resonate well with national policy such as:

- The NPF’s drive for integrated land use, spatial and transport planning and inclusivity;
- The NDP’s objective of making use of connecting to existing community facilities and high-capacity public transport;
- CAP’s emissions targets;
- NIFTI’s proposed road user hierarchy prioritising active travel followed by public transport and private vehicles; and
- The National Sustainable Mobility Policy’s encouragement of land use and transport planning integration.

The objectives for the project are therefore based on the principles outlined by these primary policy documents and others that reflect these sentiments as outlined in the following section.

#### **4.4 Project Objectives**

Overarching project objectives were identified in conjunction with DLRCC to provide clear direction for the project. These include the following:

1. To create a climate resilient infrastructure framework for the Rathmichael and Old Connaught LAP areas that seeks to promote walking, cycling and public transport and endeavours to avoid the need to travel, shift travel to environmentally friendly modes and to improve the energy efficiency of transport modes.
2. To create sustainable communities within the LAP areas that have access to social, economic and community opportunities by providing enabling infrastructure and by connecting the LAP areas to adjacent communities and infrastructure available at these locations.
3. To acknowledge and respect the rich biodiversity, heritage, history, and landscape within the area and to incorporate these elements into the infrastructural design of new communities.
4. To create an attractive area for residents and visitors through the weaving of green infrastructure into communities, the active preservation and enhancement of biodiversity and the provision of

high-quality sustainable transport, sustainable drainage and flood risk management, water, utilities, recreational infrastructure while integrating areas of high-quality biodiversity into the settlement structure.

- To provide sustainable travel options embedded in high quality public realm space to reduce the need for car and to promote the use of public transport, walking and cycling.

## 4.5 Key Performance Indicators

Table 4-1: shows key performance indicators (KPIs) which will be used to evaluate infrastructure options against when the multi-criteria analysis (MCA) is carried out. The KPIs are presented under the discipline headings of the baseline assessment. The KPI's are linked to the project objectives outlined in the previous section.

**Table 4-1: Key Performance Indicators**

Considerations	Criteria
General Policy and Spatial Planning	Contributes to the ability to develop at sufficient scale to deliver attractive communities (e.g. local social, community and economic facilities)
	Improves urban environment health and liveability
	Improves accessibility to existing social infrastructure (e.g. schools, recreation, healthcare)
	Facilitates the delivery of social and affordable housing
	Facilitates sustainable development patterns and to deliver compact growth
Environmental	Protection and enhancement of biodiversity
	Protection of environmentally sensitive areas (e.g. aquifers, groundwater, streams and rivers)
	Improvement of air quality and reduction in noise pollution
	Protection and enhancement of archaeology and cultural heritage
Transport	Availability of an attractive and safe pedestrian network linked to internal and external opportunities
	Availability of a safe cycle route network linked to internal and external opportunities
	High level of permeability and reduction of walking and cycling distance and time
	LAP areas linked to adjacent centres and key transport interchanges through Public Transport
	Public transport stops within 10 minute walking distance
	Mode split which favours sustainable modes over car usage when compared to the existing situation
	Proposed road network accommodates expected demand
Water, Wastewater and Flood	New development has access to water infrastructure
	New development has access to wastewater infrastructure
	New development has access to stormwater infrastructure



Considerations	Criteria
	High flood risk areas are avoided and mitigated
Utilities	New development has access to electricity network
	New development does not encroach on Dublin Array corridor
	New development has access to telecoms network
Parks, Open Spaces, Green Infrastructure & Landscape	10-minute walk (800m) to public open space and/or parks with facilities (play areas, outdoor gyms, MUGA's, etc.)
	Pedestrian, cycle connections to Parks and Open Space
	Protection and integration of green assets such as trees, hedges, parks and natural habitats such as rivers, streams and woodlands

## 5. Proposed Settlement Strategy

### 5.1 Introduction

This section proposes a high-level settlement strategy for the development. The settlement strategy development commences with a spatial analysis of the two LAP areas by identifying the key settlement structuring elements that has been derived from the baseline analysis. Following this, a number of density principles have been identified to guide development and both the structuring elements and the development principles are employed to provide a proposed high level settlement strategy for the two LAP areas.

### 5.2 Spatial Analysis

This section outlines key features that spatially structure the development of the LAP areas. This list of features is not exhaustive and is graphically presented and discussed below.

#### 5.2.1 Physical Constraints

Figure 5-1 shows physical features that will shape the development of the two LAP areas. The topography towards the west is a natural feature where steep slopes reduces the suitability for land to be developed. In addition, the DLRCC CDP has identified an objective to restrict insensitive or large-scale development for any land above the 90m elevation line. This line runs along the western edge of the two LAP areas and specifically affects residential zones lands in the northwestern corner of Rathmichael.

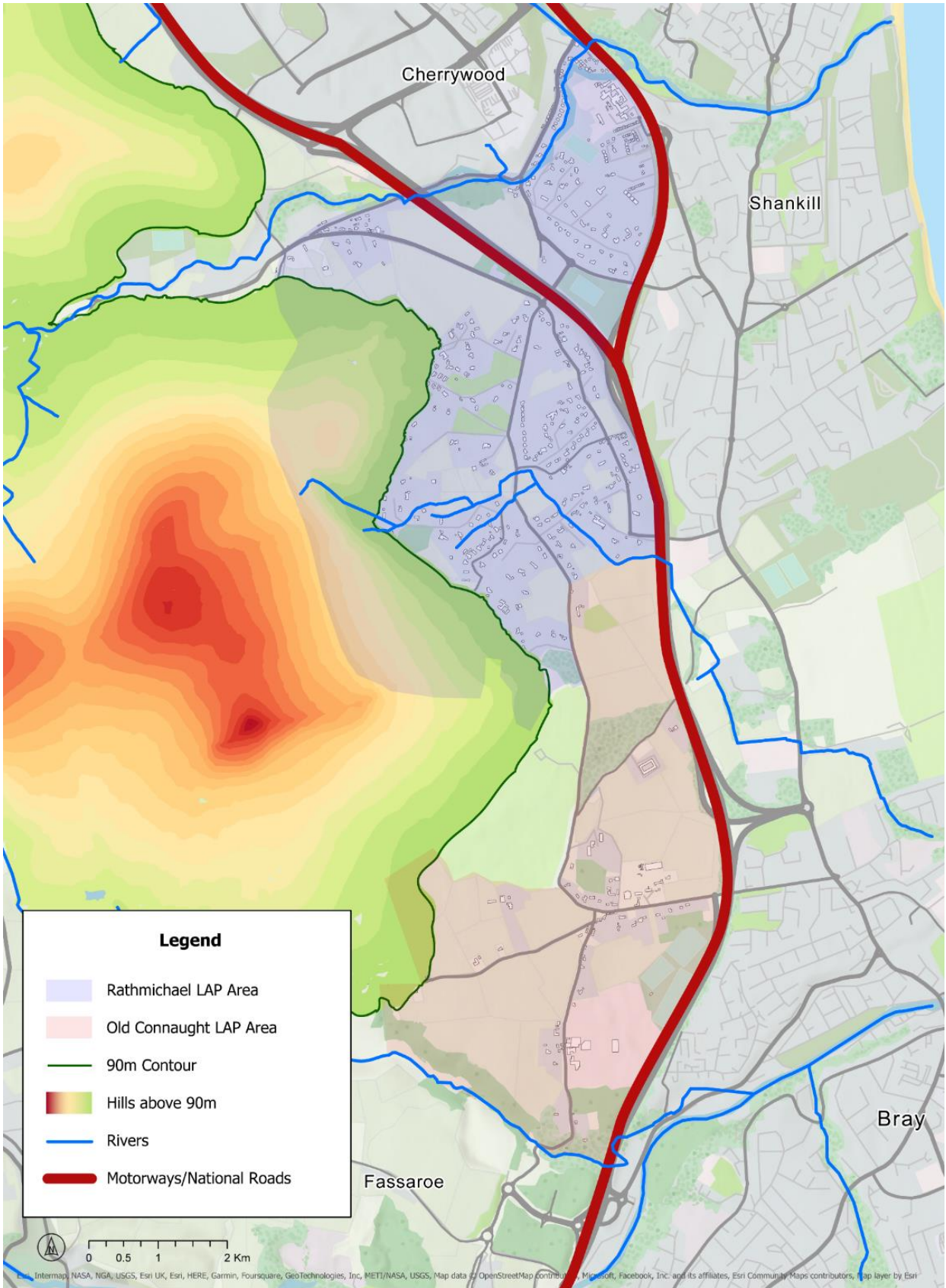
The N11/M11 and M50 are national roads that segregates the two LAP areas from existing built-up areas to the east and the M50 also bisects Rathmichael. These roads act as barriers for the provision of services especially wastewater and segregates new development in the LAP areas from employment and community services and public transport opportunities. New linkages across these roads are required to integrate the LAP areas to existing built up areas.

There are also a number of water courses within the LAP areas that impact on east west and north south movement between the LAP areas and surrounding built up areas. Although these water features can be regarded as barriers for movement of people and vehicles, they are wildlife corridors that needs to be preserved and integrated future development as green and blue assets.

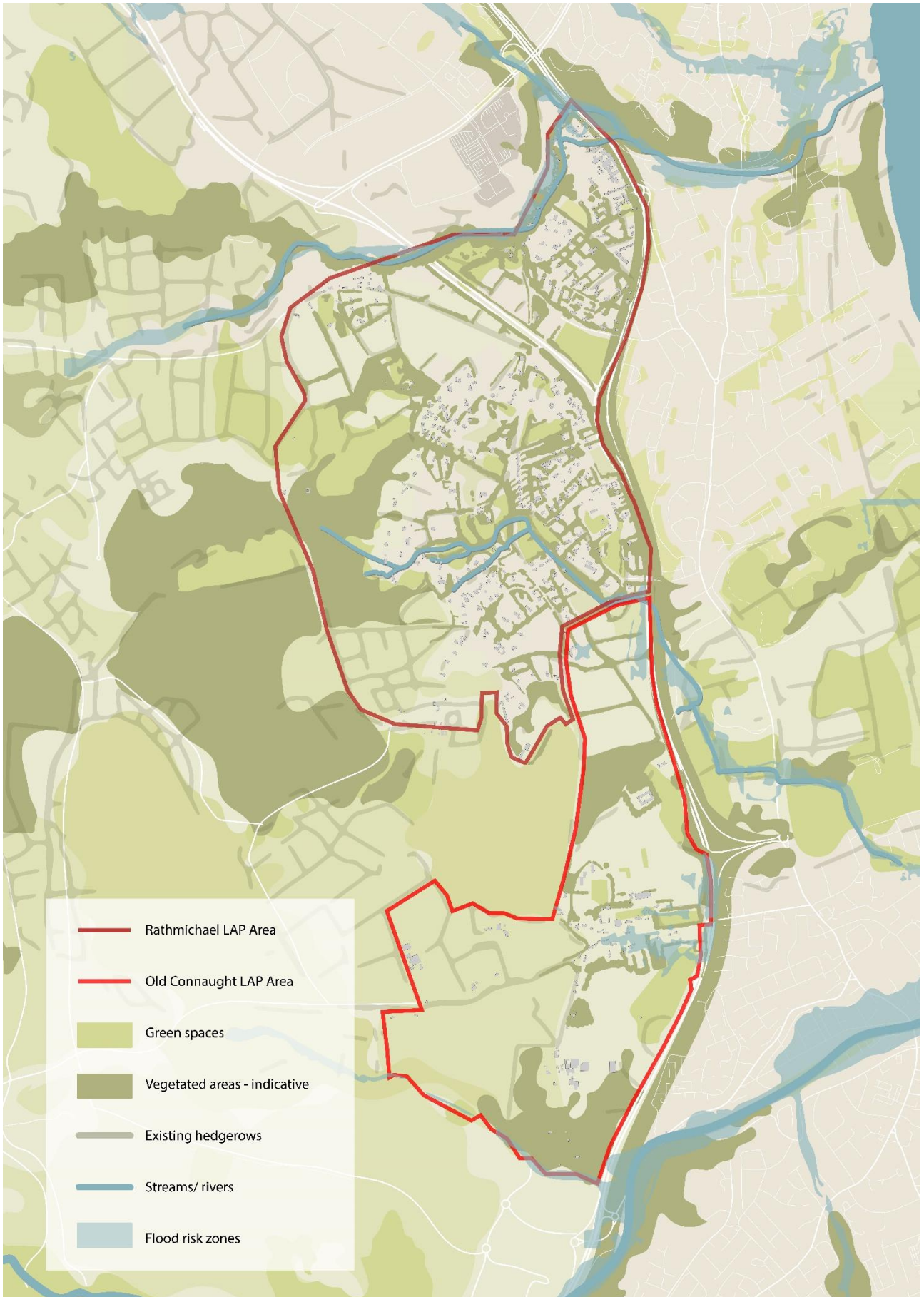
#### 5.2.2 Natural Environment

Figure 5-2 shows the abundance, variety and richness of woodlands, parks, trees and hedgerows available within the two LAP areas, most of which is mature and provides habitats for wildlife. 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 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. The natural environment will need to be carefully considered in the development of the two LAP areas. Not only would they be preserved for wildlife habitats and movement corridors, but can also provide linkages between neighbourhoods, roads and active travel link and contribute to an improvement of the overall permeability of these areas for pedestrians and cyclists.



**Figure 5-1: Physical Constraints**



**Figure 5-2: Natural Environment**

### 5.2.3 Expected Development Phasing

The expected development phasing is an important consideration in the development of the LAP areas as it provides direction especially in relation to connectivity. For purposes of this analysis, three Development Scenarios are considered in line with the study brief. These are shown in Figure 5-3 to Figure 5-5:.

There may be potential for the development of around 200 to 300 new residential dwelling units in Old Connaught which would be developed in the short term and for purposes of this assessment is referred to Development Scenario 1 shown in Figure 5-3. During the short term some infill development may occur on private land especially within an approved Rathmichael LAP area and potentially can include another few hundred new dwelling units. Where feasible, existing water, drainage, electricity, and fibre connections will be expanded to accommodate these developments. A new wastewater connection across the M11/N11 will be required to accommodate the expected development.

The second scenario shown in Figure 5-4: could likely include the majority of Old Connaught to develop within the medium term (10-year horizon) potentially up to the calculated housing capacity of 2,005 units as identified in the DLRCC CDP. Within this time period, more infill development within both LAP areas may occur, Fassaroe would also start to develop and Woodbrook-Shanganagh LAP which already has been undergoing significant development (currently around 1,200 to 1,300 units under construction) would continue to develop. Significant infrastructure upgrades, such as water, wastewater and drainage, will be required to accommodate this scenario phase.

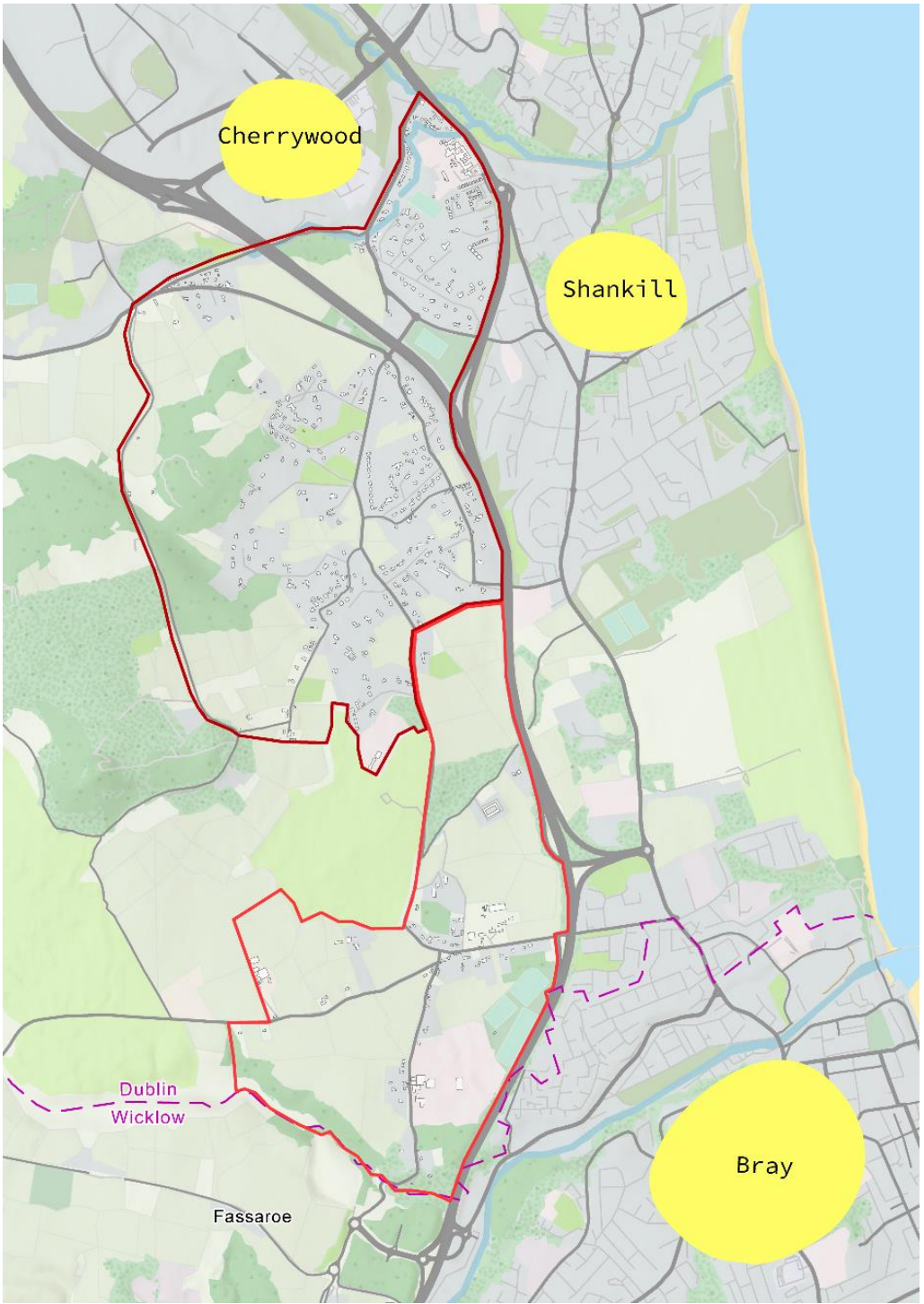
The third scenario shown in Figure 5-5: assumes the full development of the two LAP areas and assumes Old Connaught is fully developed and Rathmichael is also fully developed up to its calculated capacity of 2,431 dwelling units as per the DLRCC CDP. This will include possible areas of high-density development in appropriate areas where large portions of developable land are available and continued infill development. This scenario could also include the development of another node at the SLR land located between the two LAP areas, if these SLR lands are rezoned in the future.

### 5.2.4 Connectivity

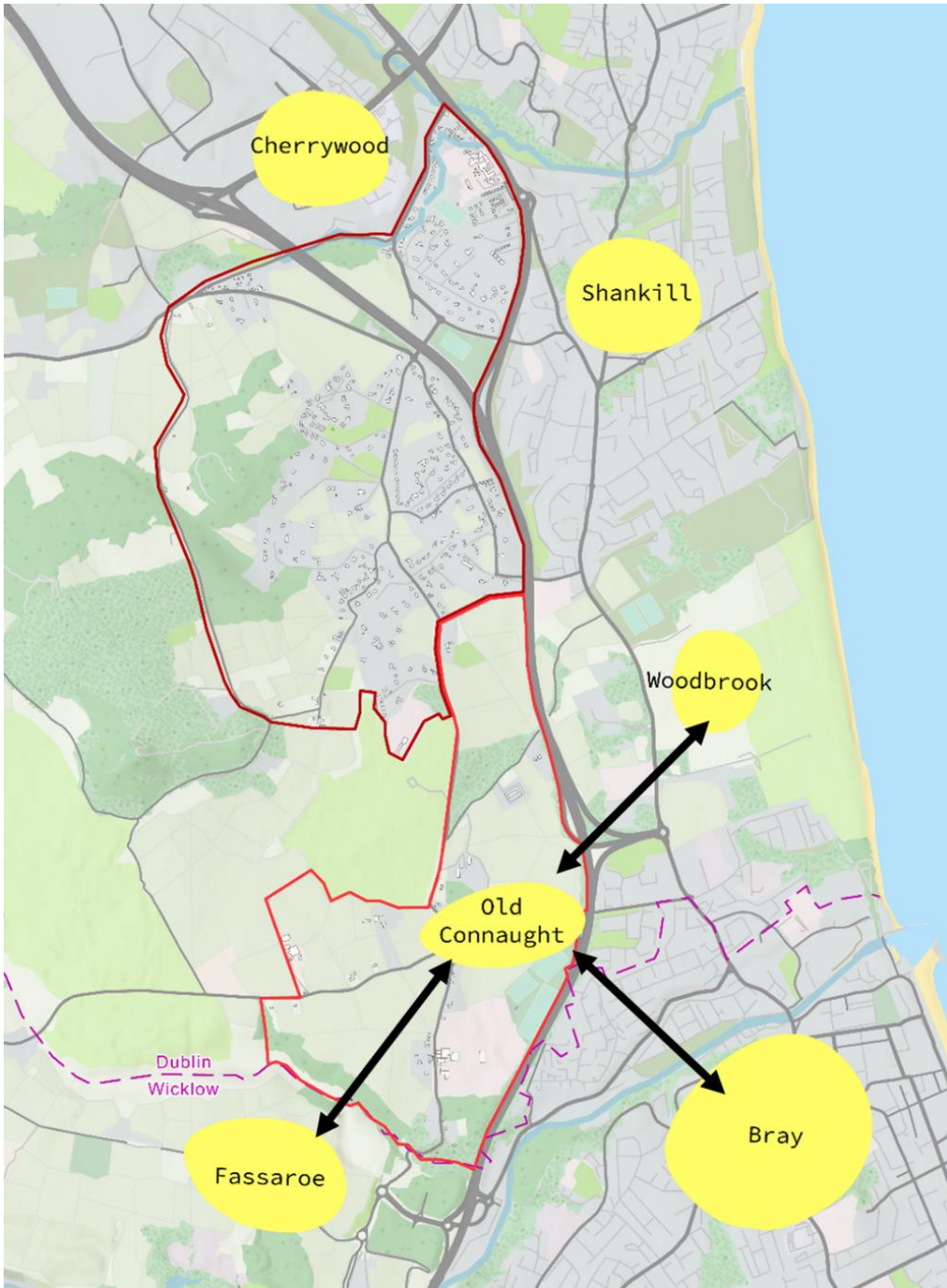
Connectivity between the developing areas will be critical to ensure that car-based trips in new development is minimised and shifted to sustainable modes of transport in existing development. These connections will include active travel and public transport connections. For Scenario 1 as outlined above it is envisaged that no major transportation infrastructure will be provided to accommodate development within this scenario except for local junction safety improvements and providing local active travel infrastructure (i.e. improvements or provision of short sections of footpaths).

It would be critical in Scenario 2 that Old Connaught is connected by public transport and active travel links to Bray, Woodbrook and Fassaroe to ensure that residents can avail of employment, community facilities and public transport available within these areas.

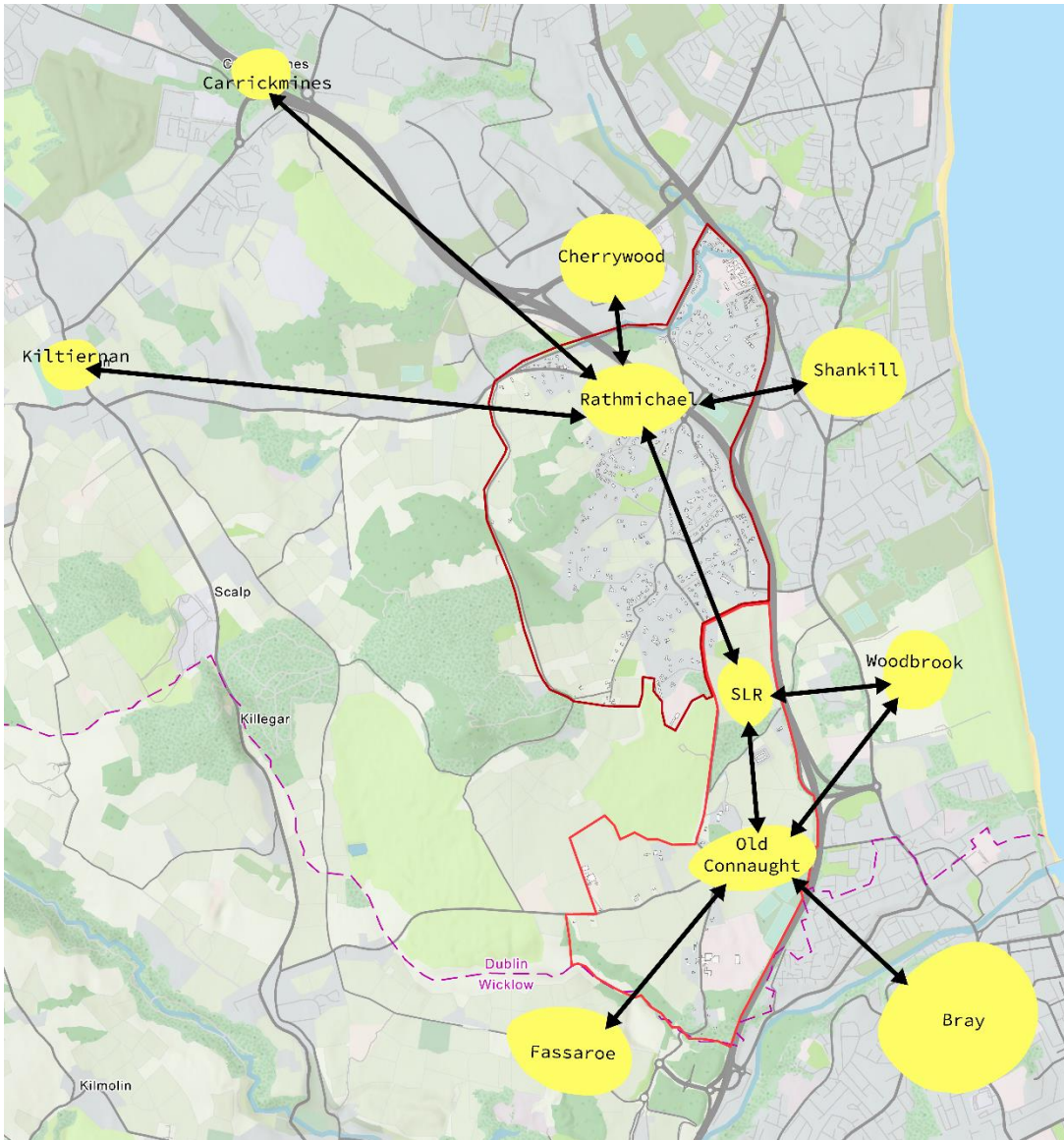
Finally in Scenario 3, public transport and active routes need to be further developed to link Old Connaught to Rathmichael LAP area and also to link the latter to Cherrywood, Shankill and Kilternan. The proposed connectivity between Old Connaught and Rathmichael can also form the framework for the development of a new urban node within the SLR lands.



**Figure 5-3: Development Phasing and Connectivity: Scenario 1 Short-Term**



**Figure 5-4: Development Phasing and Connectivity: Scenario 2 Medium-Term**



**Figure 5-5: Development Phasing and Connectivity: Scenario 3 Long-Term**

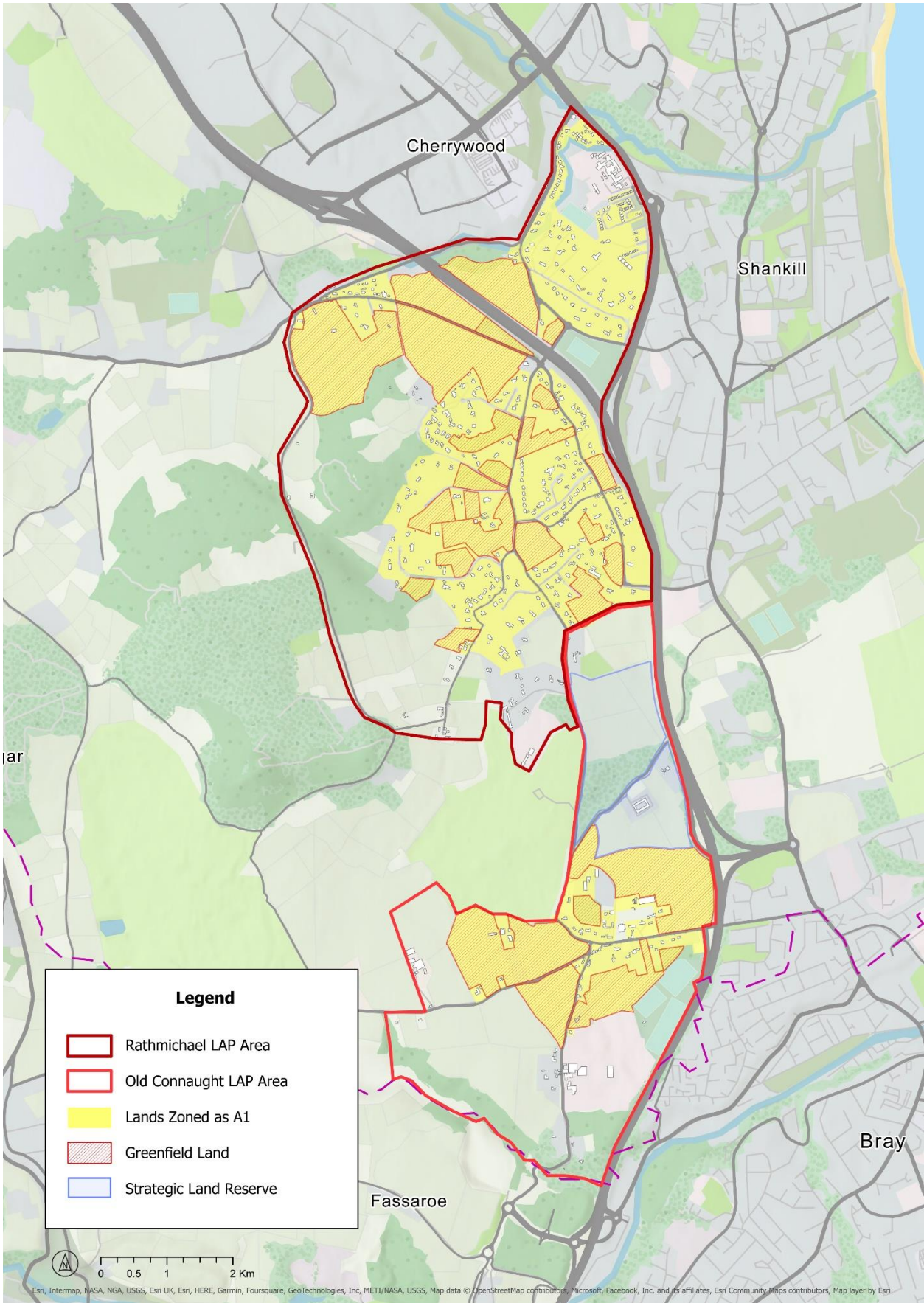
### 5.2.5 Land Availability

Figure 5-6 shows the land availability within the two LAP areas. The lands available for development, i.e. undeveloped land within Old Connaught are mostly large fields located around the existing village. Large tracts of land are generally more suitable for development (after taking potential local constraints such as flood risk into account) as they are less constrained and offer flexibility for design.

Large fields are also available for development within the northern part of Rathmichael LAP within the vicinity of Rathmichael Road. These lands are however bisected by the M50 that traverses diagonally through the area. There is limited undeveloped land in the area further to the north and the east (between the M50 and the M11/N11) and potential new development within this area would be brownfield development / redevelopment of existing built-up area.

There are a number of small undeveloped areas in the southern part of Rathmichael and the majority of these lands are privately owned. It is likely that development within this area will be private sector driven and will be infill development which will typically include relatively small housing development.





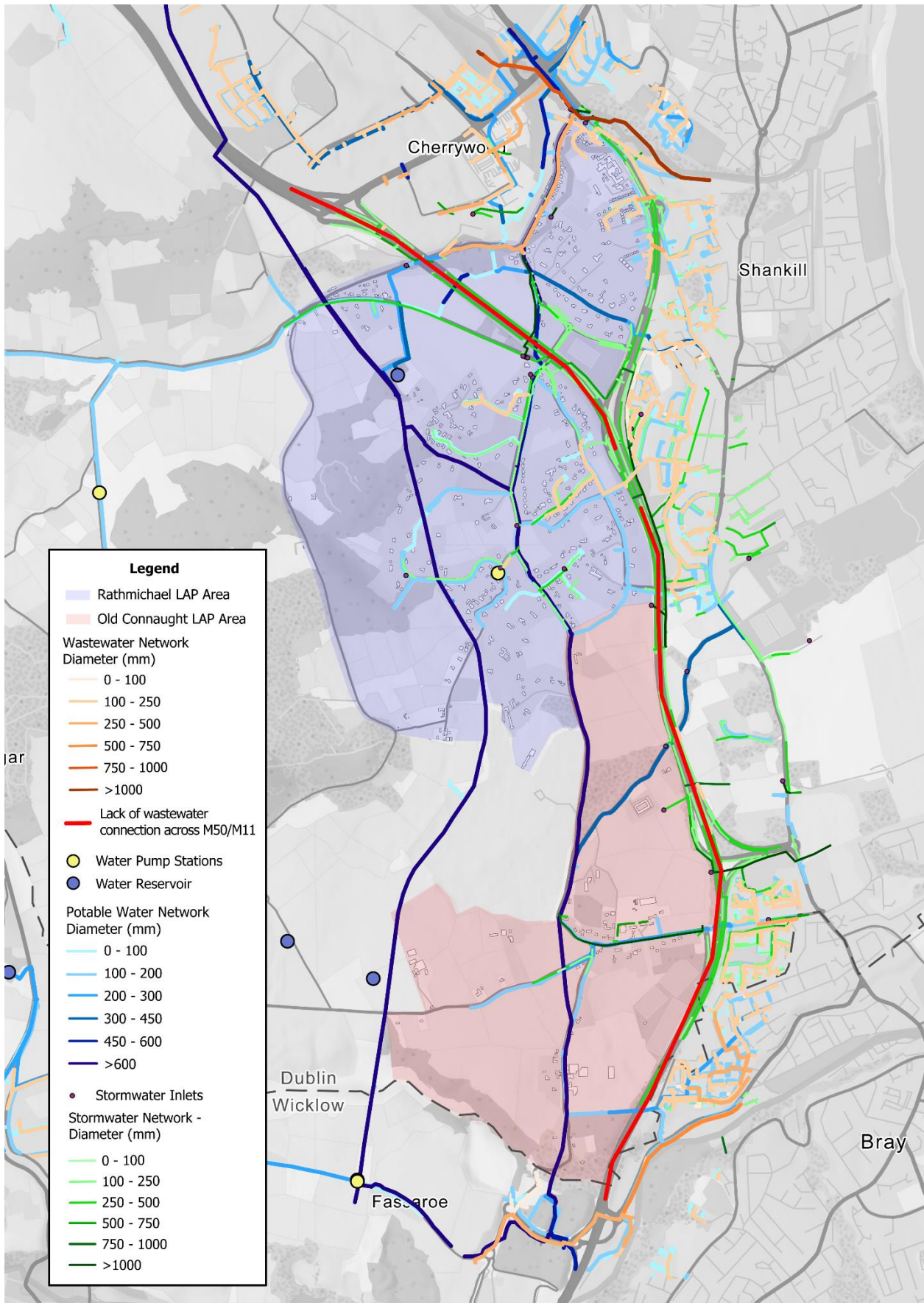
**Figure 5-6: Land Availability**

### 5.2.6 Water and Wastewater

The water and wastewater networks within the vicinity of the two LAP areas are shown in Figure 5-7. The existing water infrastructure available within the area has capacity shortcomings in the Old Connaught LAP area, which are being addressed by the Old Connaught-Woodbrook Water Supply Scheme expected to be completed by the end of 2024. To connect to the water supply network, a Pre-Connection Enquiry must be submitted to UÉ. Then, UÉ will respond with a Confirmation of Feasibility letter, which will state whether the existing UÉ system has capacity to cater for the connection and if any upgrades to existing infrastructure are required.

The existing wastewater network does not serve the two LAP areas, and existing residents own and maintain their own septic tanks. New developments are required to connect to the UÉ wastewater network on the eastern side of the M11. 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 are currently progressing options to develop a pumping station in the vicinity of Crinken Lane, to serve the Rathmichael LAP area.

A pumping station and rising main crossing of the M11, in the vicinity of Old Connaught Avenue, are required to connect the Old Connaught LAP area to the existing wastewater network. The preferred location for these are in the vicinity of Old Connaught Avenue. Preliminary discussions between UÉ, TII, DLRCC and Arup have determined that this is feasible, subject to detailed design and technical agreement between the relevant parties.



**Figure 5-7: Wastewater, Potable water, and Storm Water Overview**

### 5.2.7 ESB and Telecommunications

ESB infrastructure is shown in Figure 5-8. Both electrical and telecoms infrastructure are available within the LAP areas. To accommodate new large-scale development, ESB has indicated that network upgrades will be required for both LAP areas and a new 38kV substation would need to be established to provide the residential capacity.

Fibre connections are available and can be connected to new development but will require new fibre cabinet capacity.

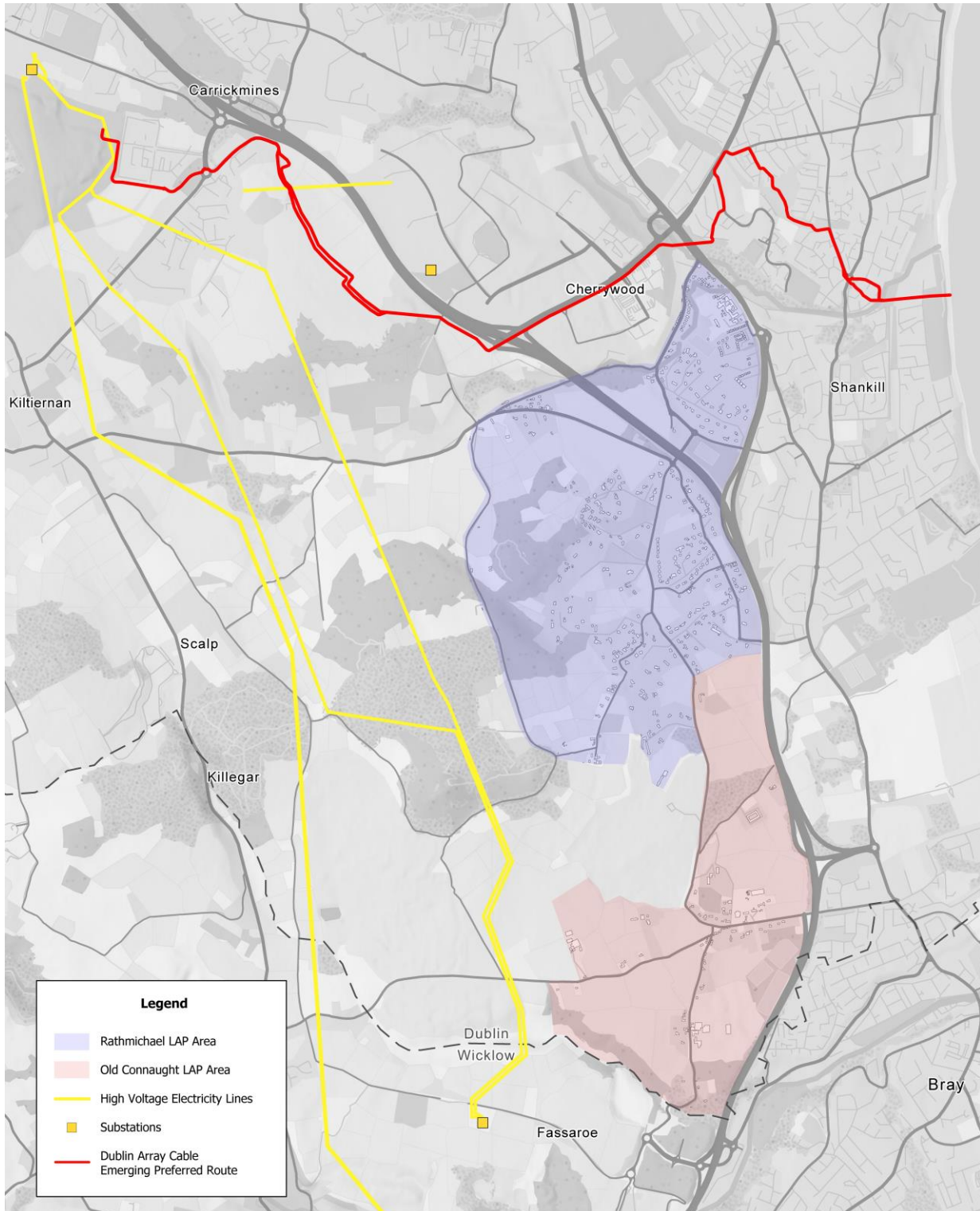


Figure 5-8: ESB Network (Include Dublin Array)

## 5.3 Development Principles

### 5.3.1 Introduction

Apart from the above spatial features that determine future urban settlement, there are development principles and good practice that should be considered to achieve a desirable outcome which is shown in Figure 5-9.

Proposed development principles for ICAS are arranged into four categories and elaborated on below:

### 5.3.2 Connectivity

Development quality is enhanced by connectivity to opportunities within the development and surrounding it. The likely means of how people travel can be influenced by the provision of **attractive** and high-quality active travel and public transport routes. Travel distance and time makes a big difference on how people will travel and it is therefore important that active travel **route choice** should be provided to offer choice for the shortest route to their destination. An increase in route choice can be achieved by ensuring that neighbourhoods are **permeable**. The introduction of filtered mobility provides active travel users more route options which is not necessarily available to car users. A **variety of travel options** ensures inclusivity and for users to find the way of travel which is the most convenient and attractive to them. **Transport oriented development (TOD)** puts a variety of travel options on the doorstep of a compactly designed community and ensures a high level of connectivity.

### 5.3.3 Inclusivity

New neighbourhoods should offer a **choice of housing** that caters for people living on their own, as couples or families and both for young and old people to create a vibrant community which arrives and leaves the neighbourhood throughout the day and evening ensuring a **sense of community**. To promote a sustainable economy local neighbourhood nodes / centres are required that offers **local retail, social and community services** that will reduce the need to travel elsewhere and create opportunities for local businesses and enterprises. The neighbourhood should be complemented by a **variety of green spaces** and integrated natural blue and green assets to improve the quality of the environment and functional space to relax in.

### 5.3.4 Sustainable Growth

Sustainable growth is achieved through the provision of **mixed land use** where a neighbourhood provides a variety of local functions to its residents, draws people from surrounding neighbourhoods and ensures that the local economy is strengthened by high footfall traffic volumes. The resilience of neighbourhoods is further strengthened by compact development where high-density land use is promoted served by a well-developed active travel and public transport network. Locating a wide variety of functions within a limited space calls for integrated land use where buildings perform more than a singular function and functions are within walking distance and connected to public transport.

### 5.3.5 Context

The Rathmichael and Old Connaught LAP areas both have unique characteristics that need to be sensitively preserved and incorporated into any new development design. There are especially a variety of **blue and green assets** and heritage features that form part of the **neighbourhood character** and needs to be sensitively treated. This is to the benefit of the two LAP areas and provides strong building blocks to develop unique communities with a special **sense of place**.

# Development Principles



Figure 5-9: Development Principles

## 5.4 Proposed Settlement Strategy

### 5.4.1 Old Connaught Settlement Strategy

Guided by the spatial analysis and the development principles outlined above, an emerging settlement strategy for Old Connaught is shown in Figure 5-10.

The most strategic land, due to its proximity to existing development and services available within the Old Connaught LAP area is located in the northeast quadrant formed by Old Connaught Avenue crossing the N11 / M11. There is currently limited employment, community services and public transport services within the LAP area so any development will need strong links to employment opportunities and services in Bray and other surrounding areas. It is therefore proposed that a high-density residential core area is located within the lands to the north of Old Connaught Avenue and this node should also be the prime location for the provision of supporting community services, convenience shopping and local employment to reduce the need to travel longer distances to avail of similar services.

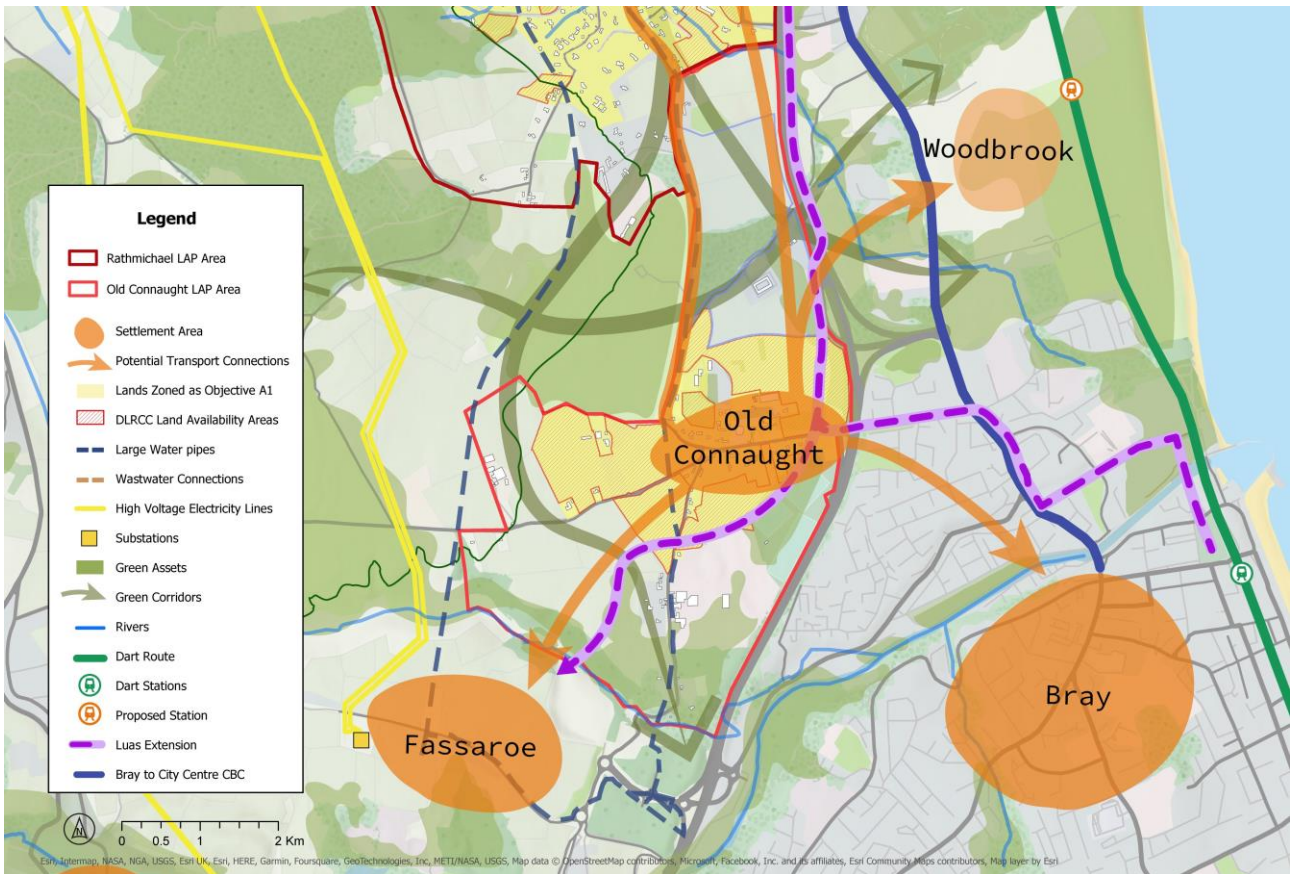
New east west and north south active travel links will be required to connect the proposed core area to Bray, Fassaroe and Shanganagh – Woodbrook. Public transport linkages will also be required to link this node to its surroundings, potentially starting off with a bus service between Fassaroe, Old Connaught and Bray which could be upgraded to a north south bus service once Rathmichael is substantially developed. In the longer term, if the Strategic Land Reserve develops, a new node can be developed between the two LAP areas which will strengthen the case for this north south public transport corridor which in the longer term could transition from a bus-based service to Luas with stops at Old Connaught and other nodes along the corridor.

As the high-density nodes are delivered it is proposed that lower density development is provided as distance increases from the key transport nodes reflective of the fact that these areas are less strategically located and less well suited for development as they do not align as strongly with our development principles and national policy.

A new internal road network will be required to serve the lands. This may include a new north-south strategic road running between the N11/M11 and Ferndale Road. This road will possibly provide for all modes of transport including private vehicles, public transport services and active travel. The provision of possible east west routes would also be explored between Ferndale Road and any proposed north south link to enhance transport options. A road link between Old Connaught Avenue and Thornhill Road is required to unlock the development lands to the south of Old Connaught Avenue. This would allow for the possible redevelopment of the properties adjacent to Old Connaught Avenue.

There are number of green corridors to be preserved and enhanced especially those which traverse the northern and western parts of the study area. These will complement the Glendoo Mountain to Shanganagh corridor.

Potable water, surface water infrastructure, wastewater, electrical connections and telecommunications are feasible within the LAP area as outlined in previous sections.



**Figure 5-10: Old Connaught LAP Urban Settlement Strategy**

#### 5.4.2 Rathmichael Settlement Strategy

The emerging settlement strategy for Rathmichael as shown in Figure 5-12 envisages a high-density core area in the undeveloped land located to the north within the vicinity of Rathmichael Road and the M50. The available development land makes this area suitable to accommodate a focal node of development and the location is also strategically placed in close proximity to Cherrywood, a major employment hub and which also provides access to the Brides Glen Luas stop. It is also located within walking distance of Shankill where further employment and community services are available. This area is envisaged to straddle across the M50 which will require well developed east west linkage across the motorway.

There are small pockets of undeveloped land available within the existing Rathmichael residential area and it is envisaged that infill development will take place within these pockets. potential for the development of a local community / service centre in the existing Rathmichael area.

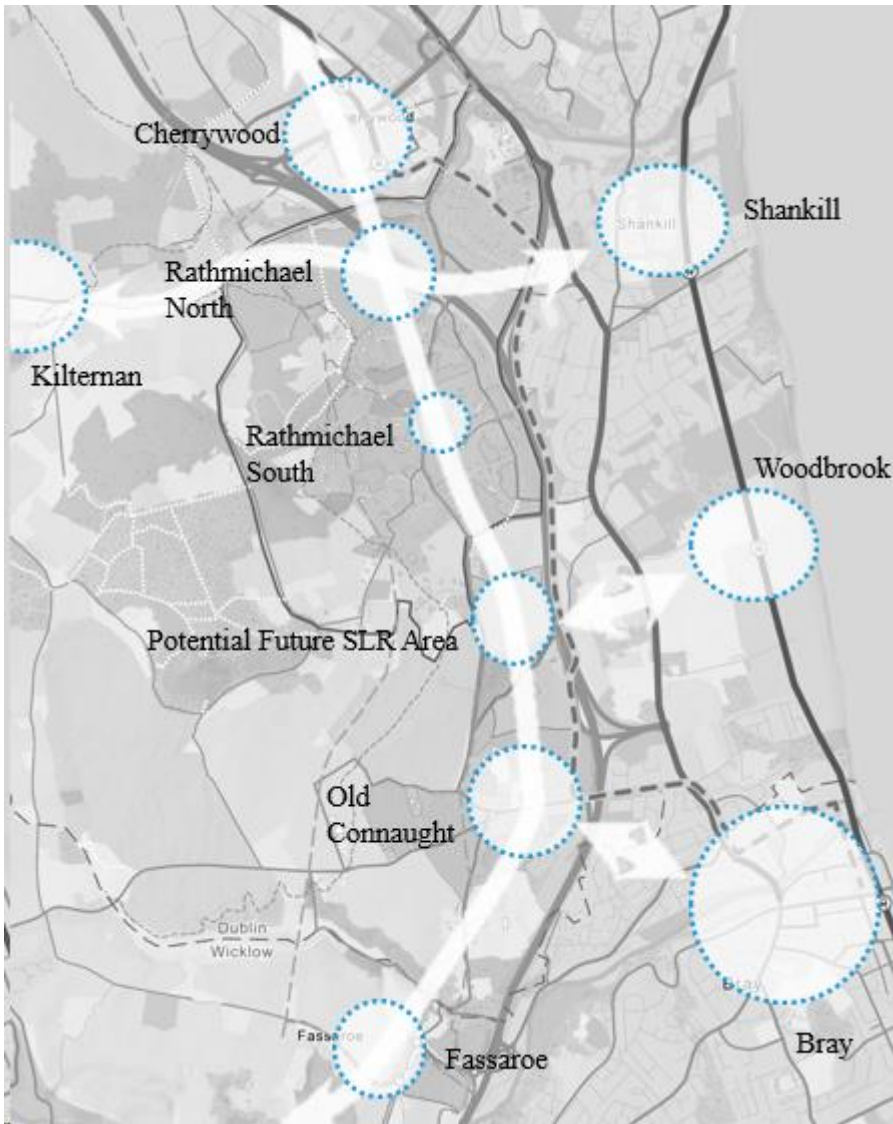
New active travel north-south and east-west links will be required to connect the proposed core areas to each other but also to its surroundings including Cherrywood, Shankill, Kiltarnan, Woodbrook and Old Connaught.

Key to the development would be the introduction of a public transport service which may likely be a north south bus service linking to Old Connaught to the south and to Cherrywood and Shankill respectively to the north and east. In the longer term this service could transition from a bus-based service to Luas with the potential for a stop in Rathmichael (depending on alignment) and stops at Old Connaught and other nodes along the corridor.

Considering the long-term strategy for public transport taking all future development areas into account it is envisaged that a strong north south public transport link can be provided to the west of the M11/N11 which connects a series of communities and village centres.

From north to south this will include Cherrywood to the north, the new primary core area at Rathmichael north, the secondary core area further south, the SLR possibly developing as a village in the future, Old Connaught core area and Fassaroe to the south. This concept is displayed in Figure 5-11.





**Figure 5-11 Long Term Potential Public Transport Linkage to the west of the N11**

There are a number of green corridors that run through the Rathmichael LPA area which will require protection as they function as habitats and movement corridors for wildlife. These corridors will also provide opportunity for active travel connections where appropriate. The abundant trees and hedges provide a unique character to the area that needs to be integrated in new communities.

Potable water, surface water infrastructure, wastewater, electrical connections and telecommunications are feasible within the LPA area as outlined in previous sections.

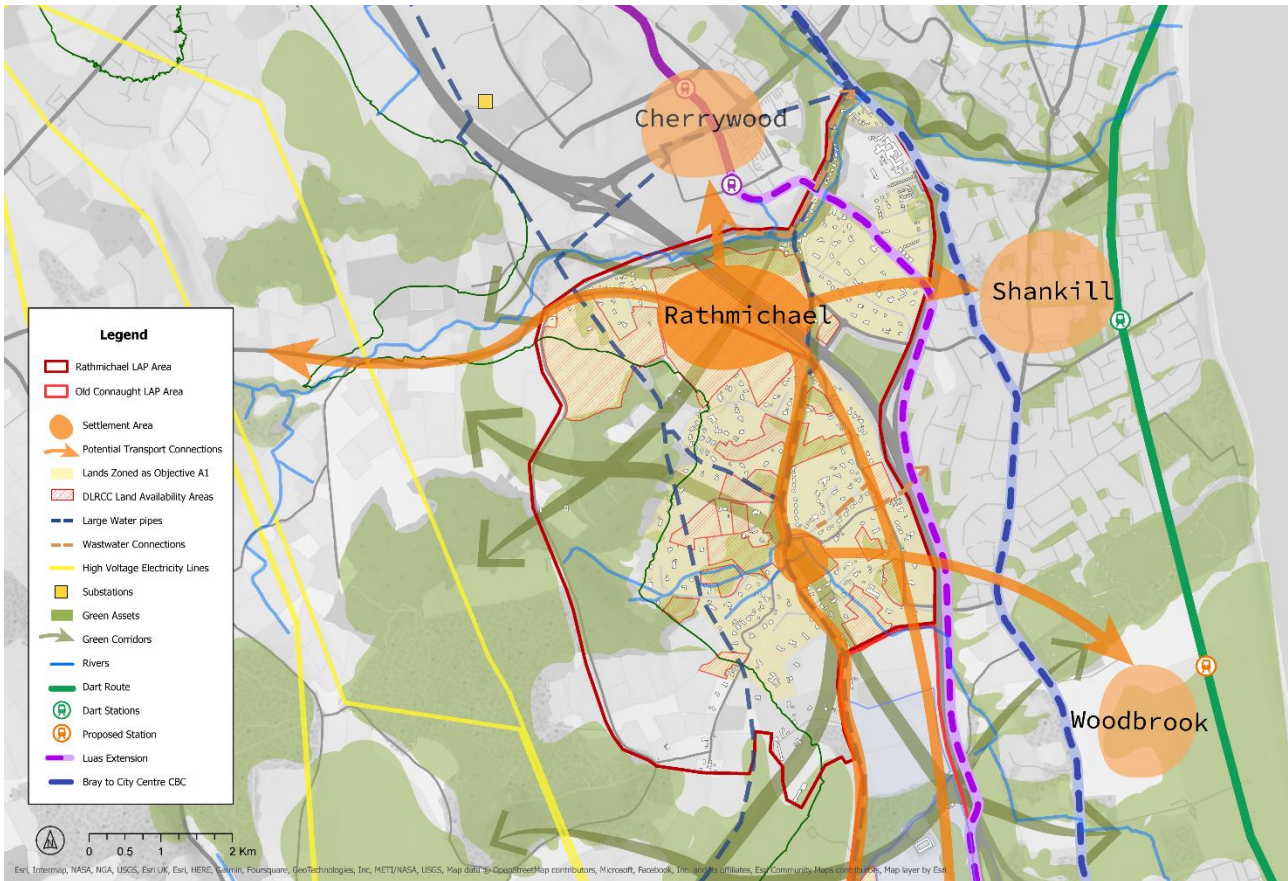


Figure 5-12 Rathmichael LAP area Settlement Strategy

## 6. Conclusion

### 6.1 Introduction

The Position Report provides the objectives of the study and is used as the basis for transport and other strategic infrastructure options to inform the development of LAP areas. The objectives set is in line with national, regional and local policies that applies to the two LAP areas. The report commenced with a summary of the Baseline Analysis by considering general policy, land use and spatial planning, environmental considerations, parks, open spaces, green infrastructure and landscape, transport, water, wastewater and flooding and utilities. From this, a set of development principles is identified which informs the identification of study objectives. Finally, a high-level settlement strategy is proposed to guide the provision of required infrastructure as the ICAS process progresses.

### 6.2 Baseline Summary

The policy context on national, regional and local level was set out, outlining findings in the Project Ireland 2040: National Planning Framework (NPF), the National Development Plan 2021 to 2030, the Climate Action Plan 2023 and the National Investment Framework for Transport in Ireland. This was followed by a review of the Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031 and the Greater Dublin Area Transport Strategy 2022-2042. On a local policy level, the Dun Laoghaire Rathdown County Development Plan 2022 – 2028 was reviewed.

An overview of baseline conditions was provided in terms of the land use and spatial planning context, environmental considerations, parks open spaces, green infrastructure, biodiversity and landscape, transportation and water, drainage, flood risk & utilities. The opportunities and constraints for each discipline were also outlined.

### **6.3 Proposed Principles and Objectives**

Following the baseline summary proposed principles and objectives for the ICAS study were identified. The principles and objectives identified were based on the national, regional and local policy context of the LAP areas.

Overarching project objectives were identified that evolved around climate resilience, building sustainable communities, respecting the rich biodiversity, heritage and history and incorporating it in future development, creating attractive communities based on sustainable transport. This was followed by the identification of key performance indicators (KPIs) for general policy, spatial planning, environmental, transport, water, wastewater & flooding, utilities and parks, open spaces, watercourses green infrastructure & landscape.

### **6.4 Proposed Settlement Strategy**

High level settlement strategies were developed for each of the two LAP areas. This was based on a spatial analysis and identified development principles. The spatial analysis reviewed the LAP areas in terms of physical constraints, green and blue assets, development phasing, connectivity, land availability and the availability of water, wastewater and utilities networks. The development principles were based on four overarching aspects: connectivity, inclusivity, sustainable growth and context.

The proposed settlement strategies a high level urban structuring elements, the need for connections and links to surrounding areas, potential transport corridors, the integration of green corridors and assets and the availability of services.

### **6.5 Next Steps**

The next step in the ICAS project is options development and assessment. The settlement strategy outlines how new communities could potentially be shaped, connected to surrounding areas and served by infrastructure and utilities available.

Spatial planning and development options will be explored to identify appropriate densities and housing typologies within each LAP area to achieve sustainable communities. The successful development of the LAPs is very much dependent on transport planning which will explore transportation options by mode of transport, internal and external links that will be put through an multi criteria assessment analysis. The options assessment study will explore how green corridors and assets can be incorporated in the provision of infrastructure, ensure they are protected as far as possible and enhanced were possible.

Services and utility infrastructure options will also be explored in the context of the spatial options developed.