Waterford Metropolitan Area Transport Strategy

Baseline Conditions and Policy Context Report

December 2020

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CONTENTS

1   Introduction

The National Transport Authority (NTA) is a public body set up under statute and established in December 2009. The role and functions of the NTA are set out in three Acts of the Oireachtas; the Dublin Transport Authority Act 2008, the Public Transport Regulation Act 2009 and the Taxi Regulation Act 2013. In August 2015, the Department of Transport, Tourism and Sport (DTTaS) published its policy document *"Investing in our Transport Future - Strategic Investment Framework for Land Transport"*. Action 4 of that framework states that: *"Regional transport strategies will be prepared by the NTA and provide an input to regional spatial and economic strategies".*

Having regard to its role in relation to transport, and the action placed upon it in the DTTaS policy document, the NTA, in collaboration with Transport Infrastructure Ireland (TII), the Southern Regional Assembly, Waterford City & County Council and Kilkenny County Council, is developing a Transport Strategy for the Waterford Metropolitan Area (WMA) covering the period 2020 to 2040. The Waterford Metropolitan Area Transport Strategy (WMATS henceforth) will provide a framework for the planning and delivery of transport infrastructure and services in the Waterford Metropolitan Area over the next two decades. It will also provide planning policy to which other agencies can align their future policies and investment.

This report sets out the prevailing policy context as well as providing the baseline conditions to inform the development of the WMATS.

1.1   Statutory Basis for Integrating Spatial and Transport Planning

The development of WMATS will be consistent with the National Planning Framework (NPF 2040) and other over-arching national, regional and metropolitan plans and policies that are presented in more detail in Chapter 2 of this Report. However, at present the statutory requirement for mutual consistency between the Regional Spatial and Economic Strategy (RSES) and the Transport Strategy is unique to the Greater Dublin Area (GDA) and is not a statutory requirement in any other part of the country.

At a national level, the National Planning Framework (NPF) 2040 proposes an ambitious growth target of a minimum 50% population growth for all four of Ireland's regional cities to order to enhance their significant potential to become cities of scale.

National Policy Objective 69 of the NPF outlines the Government's intention to extend the statutory arrangements between the spatial planning and transport planning already in place in the GDA, to all of Ireland's cities. While this has not yet occurred, the WMATS is being prepared with a view to it becoming a statutory document which must be considered in the planning process in the Metropolitan Area, in advance of the formal legislation coming forward.

At a regional level, the Regional Spatial & Economic Strategy (RSES) for the Southern Regional Assembly (SRA) talks of how the creation of the Waterford Metropolitan Area Transport Strategy (WMATS) will be *"instrumental in the regeneration and transformation of Waterford".* The RSES mentions that WMATS would help in the *"development of a concentric city including north of the River Suir – the North Quays and other key locations".*

Within the RSES, the following transport investment objectives have been identified for the creation of WMATS:

- The preparation of a Waterford Metropolitan Area Transport Strategy and associated implementation plan;
- The improvement of accessibility to the City Centre through effective traffic management, reduced congestion and the improvement of modal choice;

- Support the delivery of the North Quays SDZ regeneration project for integrated sustainable development through the provision of supporting transport infrastructure and services;
- The provision of a citywide public transport system;
- The maintenance and enhancement of the national roads network, catering for transport demand within the Waterford Metropolitan Area, for improved inter-urban / inter-regional connectivity / reduced journey times and for improved access to international gateways, including Port of Waterford, Rosslare-Europort and Waterford Airport;
- The optimal use of the rail network, connecting Waterford at a regional and national level, to cater for the movement of people and goods; and
- The development of a metropolitan-wide cycle network, focused on the City environs, catering for a range of journey purposes, including the development of strategic cycle routes and the extension of the Waterford Greenway to link WIT to the City Centre.

1.2   Purpose of this Report

The methodology for the development of the WMATS 2040 is undertaken on a step by step basis, from:

- Reviewing the existing policy and transport baseline;
- Undertaking a demand analysis;
- Developing transport options;
- Optimisation of land use to align with high performing transport corridors;
- Developing the draft Strategy for public consultation; and
- Subsequently finalising the Strategy.

Figure 1-1: Waterford Metropolitan Area Transport Strategy Methodology

The first task in the preparation of the Strategy is an assessment of existing transport conditions. This Report outlines the current situation and conditions within the WMA in the context of land-use,

transport supply and movement patterns. In addition, the Report further outlines all current and relevant policies and planning documents pertaining to the WMA.

The purpose of this Report is to establish a clear and thorough understanding of the current transport conditions and policies which will form the basis for subsequent tasks. A review of all existing data available has been undertaken to inform this report and consideration has been given to the demand of all modes across the WMA.

1.3   Report Structure

The following outlines each section of the report:

- **Section 2:** Review of all relevant National, Regional and Local Policy and Planning Documents;
- **Section 3:** Outline of existing land-use patterns and demographic data;
- **Section 4:** Summary of existing travel demand patterns and characteristics;
- **Section 5:** Review of the current transport network and supply for all modes; and
- **Section 6:** Based on the data collated, this section highlights the key strengths and weaknesses of the current situation and potential opportunities and threats. This section also outlines the key challenges facing the WMA from a transport perspective.

2   Policy Overview (Statutory Plans, Guidelines and Studies)

2.1   Overview

This section of the report provides a concise overview of the relevant National, Regional, City/County/Metropolitan and local level policy relevant to Waterford and Kilkenny. Figure 2-1 outlines the documents that were reviewed as part of this policy review.

National Level	
Policy/Plans • National Planning Framework 2040 • The National Development Plan 2018-2027 • Ireland Planning Policy Statement 2015 • Smarter Travel 2009-2020 • Rebuilding Ireland: Action Plan for Housing and Homelessness • Climate Action Plan 2019: To Tackle Climate Breakdown	**Guidance** • Sustainable Residential Development in Urban Areas • Urban Design Manual: A Best Practice Guide • Design Manual for Urban Roads and Streets (updated 2019) • Permeability: A Best Practice Guide • Spatial Planning and National Roads: Guidelines for Planning Authorities • Achieving Effective Workplace Travel Plans: Guidance for Local Authorities • Ireland's Climate Strategy to 2020 and beyond • National Cycle Policy Framework • National Cycle Manual

Regional and Metropolitan Level Policy
Regional Spatial and Economic Strategy (RSES) for the Southern Region Waterford Metropolitan Area Strategic Plan (MASP) as part of the RSES

City and County Development Plans
Waterford City Development Plan 2013-2019 Waterford County Development Plan 2011-2017 Waterford City and County Development Plan 2022-2028: Strategic Issues Paper Kilkenny County Development Plan 2014-2020 Pre-Draft Issues Paper Kilkenny County Development Plan 2020-2026

Local Level Policy
Ferrybank Belview Local Area Plan 2017 Tramore Local Area Plan 2014-2020 Waterford City Centre Urban Renewal Scheme 2015 North Quays Strategic Development Zone Planning Scheme 2018 Transforming Waterford: Integrated Transport Proposal 2017 Planning, Land Use and Transportation Study (PLUTS) 2004 Cycle Network Plan for Waterford City and Environs 2014

Figure 2-1: Overview of Policy and Guidance Reviewed

2.2   National Level Policy

2.2.1   National Planning Framework 2040 (Department of Housing, Planning, Community and Local Government, 2018)

The National Planning Framework (NPF) 2040 is a strategic development framework that sets out the long-term context for Ireland's physical development and associated progress in economic, social and environmental terms. The NPF is being followed and underpinned by supporting policies and actions at sectoral, regional and local level.

The Waterford Metropolitan Area lies within the Southern Regional Assembly area. The Southern Regional Assembly, established on 1st January 2015, is one of three Assemblies in Ireland along with the Northern and Western, and the Eastern and Midland regional assemblies. Each of the assembly areas is shown in Figure 2-2 below.
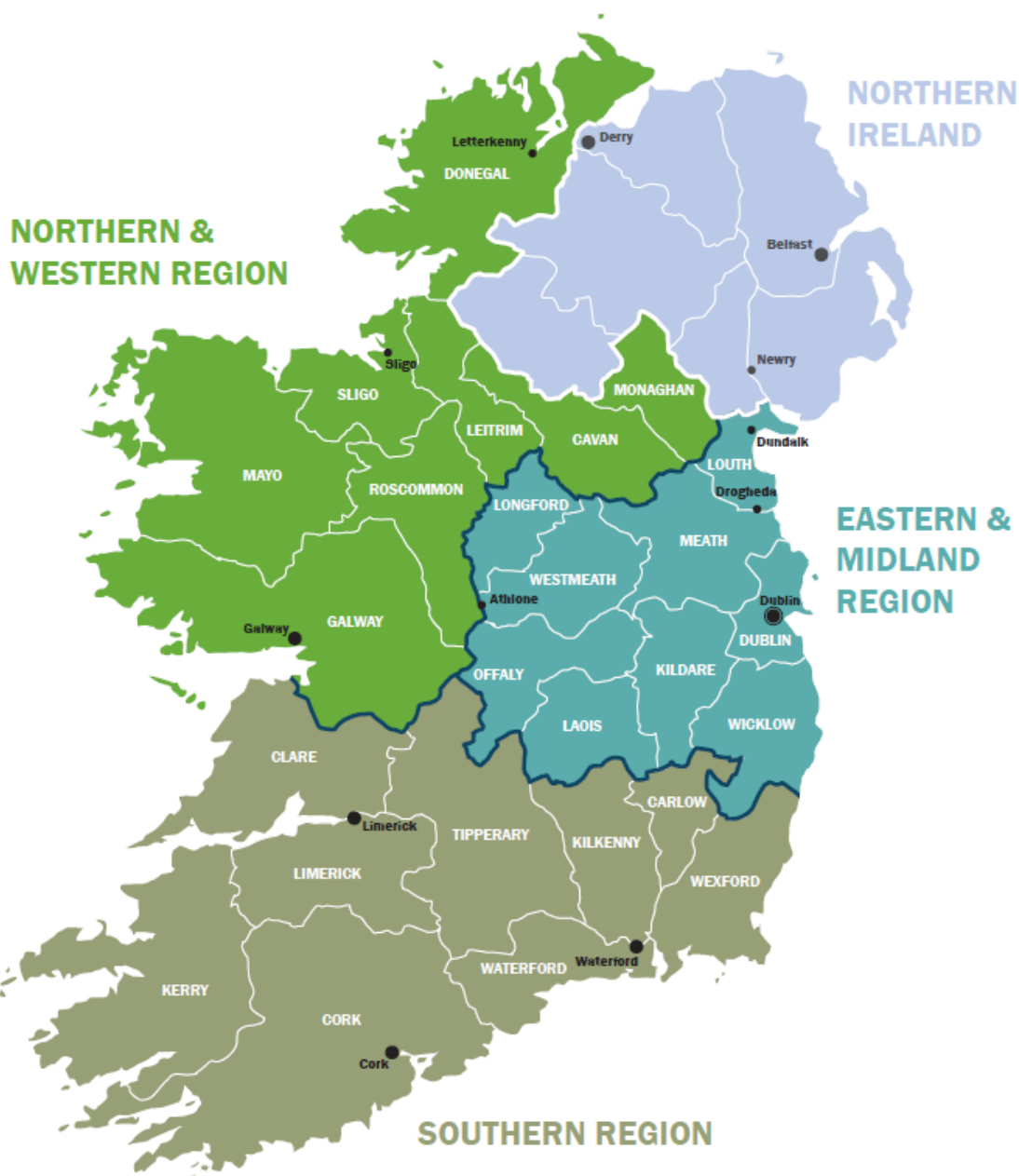

Figure 2-2 Ireland's Regional Assembly Areas and Northern Ireland – National Planning Framework 2040

The NPF has identified that the big challenge for the Southern Region in the period to 2040, will be to position its cities to be more significantly scaled, compact and attractive, acting as metropolitan drivers for the region, and as effective complements to the economic strength of the Greater Dublin Area.

Due to the large geographical extent of each assembly area, each RSES will be informed by smaller Strategic Planning Areas (SPAs) which cover key economic catchments. Waterford lies within the South-East SPA.

Waterford is projected to grow with at least an additional 35,000 people by 2040 to support a minimum population of 85,000 within the CSO defined *City and Suburbs* alone.

Some of the key transport growth enablers outlined in the NPF relevant to the development of WMATS include:

- Delivering the North Quay SDZ regeneration project for integrated, sustainable development together with supporting infrastructure, including a new pedestrian bridge or a pedestrian / public transport bridge over the River Suir;

- Identifying infill and regeneration opportunities to intensify housing and employment development throughout the city centre and inner suburban areas;

- Progressing development of new greenfield areas for housing and the development of supporting public transport and infrastructure;

- Provision of a Citywide public transport network, with enhanced accessibility from the City Centre to Waterford Institute of Technology (WIT);

- Development of a strategic cycleway network with high capacity flagship routes, including the extension of the Deise greenway to link WIT to the City Centre; and

- Enhanced regional connectivity through improved average journey times by road to Cork, Limerick and ports within the city.

2.2.2   The National Development Plan (NDP) 2018-2027 (Government of Ireland, 2018)

The National Development Plan was published in tandem with the NPF and is set to drive Ireland's long term economic, environmental and social progress. The NDP is fully integrated with the approach to Ireland's spatial planning in the NPF and provides a comprehensive breakdown of the ten National Strategic Outcomes (NSO).

Some of the key NDP investment actions which are relevant to the Strategy are summarised as follows:

- Bus Connects for Ireland's Cities;
- N24 Waterford to Cahir;
- N25 Waterford to Glenmore; and
- Progression of the Waterford North Quays SDZ regeneration project.

The North Quays SDZ project is listed as an example of a project that could potentially benefit from the Urban Regeneration and Development Fund (URDF). IN November 2020, the Irish Government announced funding of over €110 million to facilitate enabling works to contribute to integrated urban development and the provision of strategic infrastructure including a Sustainable Transport Bridge.

2.2.3 Ireland Planning Policy Statement 2015 (Department of Environment, Community and Local Government, 2015)

The purpose of Ireland's planning policy is to assist with decisions on competing development options in the future. It aims to deliver a planning process that will:

"ensure the right development takes place in the right locations and at the right time in providing the social, economic and physical infrastructure necessary to meet the needs of our people in a way that protects the many qualities of our natural and built environment"

National, regional and local officials aim to implement the ten principles the Planning Policy Statement is built upon (as listed below):

■ Planning must be plan-led and evidence-based;

■ Planning must proactively drive and support sustainable development;

■ Planning is about creating communities and further developing existing communities in a sustainable manner;

■ Planning must support the transition to a low carbon future and adapt to a changing climate;

■ Planning must ensure that development facilitates and encourages greater use of public transport as well as making walking and cycling more attractive for people;

■ Planning will encourage the most efficient and effective use of previously developed (brownfield) land;

■ Planning will enhance the sense of place;

■ Planning will conserve and enhance the rich qualities of natural and cultural heritage;

■ Planning will support the protection and enhancement of environmental quality; and

■ Planning will be conducted in a manner that affords a high level of confidence.

2.2.4 Smarter Travel: A Sustainable Transport Future 2009-2020 (Department of Transport, Tourism and Sport, 2009)

The Government policy document "Smarter Travel: A Sustainable Transport Future 2009 – 2020", recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development, but it also sets out the necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport.

The policy acknowledges that continued growth in demand for road transport is not sustainable due to the impact on congestion, local air pollution, contribution to global warming and promotion of increasingly sedentary lifestyles. Its main objective is to promote a significant modal shift from private transport to public transport and active modes over the period up to 2020 and to reduce the share of travel demand growth that is car dependent. Controlling development so that it is sustainable / public transport oriented, is identified as a mechanism by which this can be achieved.

The Key Goals of the policy document are to:
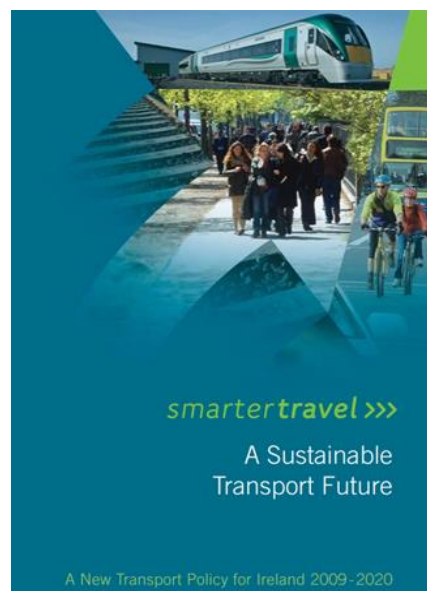
- Improve quality of life and accessibility to transport for all and with emphasis on people with reduced mobility and those who may experience isolation due to lack of transport;
- Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks;
- Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions;
- Reduce overall travel demand and commuting distances travelled by the private car; and
- Improve security of energy supply by reducing dependency on imported fossil fuels.

These are to be achieved by four main actions:

- Actions to reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live near places of employment, and the use of pricing mechanisms or fiscal measures to encourage behavioural change;
- Actions aimed at ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking;
- Actions aimed at improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies; and
- Actions aimed at strengthening institutional arrangements.

Smarter Travel outlines a key target to reduce work-related commuting by car from a current modal share of 65% to 45%, with commuting by alternative sustainable modes rising to 55% by 2020.

2.2.5 Rebuilding Ireland: Action Plan for Housing and Homelessness (Department of Housing, Planning, Community and Local Government, 2016)

This action plan is designed to accelerate housing supply in Ireland and aims to tackle the country's housing shortage. The plan focuses on actions with a common trend of increasing the delivery of homes nationwide. The plan focuses on five main pillars that are the foundation of the plan and are the starting point for immediate action under the plan. The five pillars are:

- Address homelessness;
- Accelerate social housing;
- Build more homes;
- Improve the rental sector; and
- Utilise existing housing stock.

Part of the plan also includes a Local Infrastructure Housing Activation fund that aims to provide funding to local authorities to provide infrastructure required for the building of houses. Under this activation fund Waterford has been allocated funding for supporting infrastructure at the sites outlined in

Table 2.1.

Table 2.1 Approved LIHAF projects in in Waterford

Local Authority	Project Name	Detail of infrastructure	No of housing units to be provided by 2021	Total Potential for Housing units	Total Allocation (€m)
Waterford City and County Council	Gracedieu	Access road with roundabouts	200	2,200	1.32
Waterford City and County Council	Kilbarry	Distributor Road	450	1,500	3.39

2.2.6   Climate Action Plan 2019: To Tackle Climate Breakdown (Department of Communications, Climate Action & Environment, 2019)

The Government published the Climate Action Plan in June 2019. The Plan identified how Ireland would achieve its 2030 targets for carbon emissions and a pathway towards achieving a net zero emissions by 2050.

Tackling emissions from the Transport sector (accounting for almost 20% of Ireland's greenhouse gases in 2017) is of relevance to this Strategy. The Government's approach to reducing emissions from the transport sector is to adopt policies to influence both the transport intensity of growth and the carbon intensity of travel.

To make growth less transport intensive some key policies include:

■ The successful execution of the National Planning Framework designed to promote compact, connected and sustainable living;

■ Expansion of walking, cycling and public transport to promote modal shift;

■ Better use of market mechanisms to support modal shift; and

■ The successful roll-out of the National Broadband Plan, which can promote remote working and wider activities which reduce unnecessary journeys.

The electrification of transport (both public and private) features prominently in the Plan with a range of initiatives to boost the roll-out of low emission buses and EV charge points, and to decarbonise heavy and light goods vehicles. Of relevance to this Strategy is the identification of modal shift measures including compact growth to reduce the demand for travel, the BusConnects programme, the development of a comprehensive (and safe) walking and cycling network for the metropolitan areas of Ireland's cities, expansion of smarter travel initiatives, and development of a Park and Ride Implementation Plan (that will include EV charge facilities). Other relevant measures include the enhancement of public transport priority, developing a strategy for the heavy freight sector and the ability for Local Authorities to designate low emission zones.

2.2.7 Ireland's Climate Strategy to 2020 and Beyond (Environmental Protection Agency, 2012)

Ireland's Climate Strategy to 2020 and Beyond outlines Ireland's commitment to reducing emissions by 25-40% relative to 1990 emission levels by 2020 and that these emissions be cut by 80-95% by 2050. The proposed Action Plan aims to:

■ Creating policies and measures to support technological solutions and behavioural change in transport; and

■ Focus on producing the cleanest possible technologies for the transport sector.

2.2.8 National Cycle Policy Framework 2009-2020 (Smarter Travel, 2009)

The overarching mission of Ireland's first National Cycle Policy Framework 2009-2020 is to create a strong national cycling culture where it is considered the norm. Its vision is that all cities, towns, villages and rural areas will be bicycle friendly to achieve the objective that 10% all trips will be by bike by 2020.

The key objectives of this Framework are to:

■ Support the planning, development and design of towns and cities in a cycling and pedestrian friendly way;

■ Ensure that the urban road infrastructure (with the exception of motorways) is designed / retrofitted to be cyclist-friendly;

■ Provide cycling-friendly routes to all schools, adequate cycling parking facilities within schools, and cycling training to all school pupils;

■ Ensure proper integration between cycling and public transport;

■ Provide secure parking for bikes; and

■ Improve the image of cycling and promote cycling using "soft interventions" such as promotional campaigns, events etc.
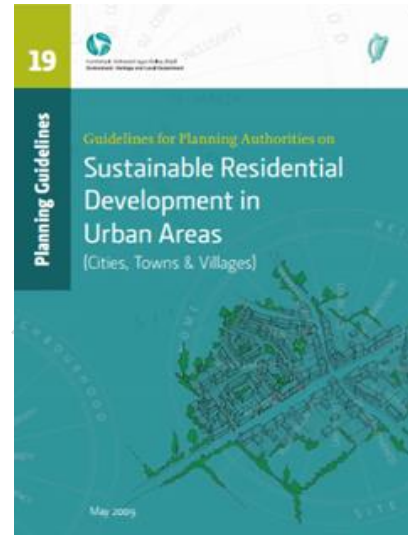
2.3 National Level Guidance

2.3.1 Sustainable Residential Development in Urban Areas (Department Environment, Heritage and Local Government, 2009)

The *Sustainable Residential Development in Urban Areas* guidance sets out the key planning principles which should be reflected in development plans and local area plans. It also guides the preparation and assessment of planning applications for residential development in urban areas.

The guidelines promote residential layouts that:

■ Prioritise walking, cycling and public transport, and minimise the need to use cars;

■ Are easy to access for all users and to find one's way around;

■ Promote the efficient use of land and energy, and minimise greenhouse gas emissions; and

■ Provide for a mix of land uses to minimise transport demand.

2.3.2 Urban Design Manual: A Best Practice Guide (Department of Environment, Heritage and Local Government, 2009)

Urban Design Manual: A Best Practice Guide provides advice on implementing Sustainable Residential Development in Urban Areas and supersedes the Urban Design Manual - A Best Practice Guide: A Companion Document to the Draft Planning Guidelines on Sustainable Residential Development in Urban Areas, 2008. The Manual is intended to be read in conjunction with Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009). The manual is underpinned by 12 design principles as outlined in Figure-24.

Figure 2-3 Graphic showing the 12 Design Principles that underpin the Urban Design Manual

2.3.3   Design Manual for Urban Roads and Streets (DMURS) (Government of Ireland, updated 2019)
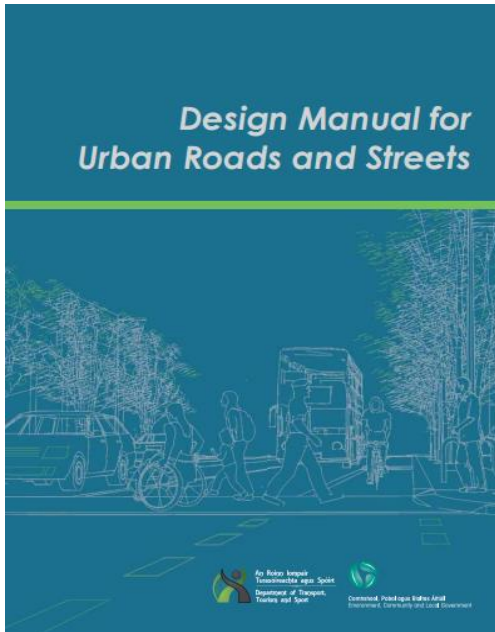
The *Design Manual for Urban Roads and Streets (DMURS)* promotes an integrated street design approach within urban areas (i.e. cities, towns and villages) focused on:

■   Influence by the type of place in which the street is located; and

■   Balancing the needs of all users.

A further aim of this Manual is to put well designed streets at the heart of sustainable communities to promote access by walking, cycling and public transport.

The principles, approaches and standards set out in this Manual apply to the design of all urban roads and streets (with a speed limit of 60 km/h or less), except: (a) Motorways (b) In exceptional circumstances, certain urban roads and streets with the written consent of Sanctioning Authorities.

The Manual is underpinned by a holistic design-led approach, predicated on a collaborative and consultative design process. There is specific recognition of the importance of creating secure and connected places that work for all, characterised by creating new and existing streets as attractive places with high priority afforded to pedestrians and cyclists while balancing the need for appropriate vehicular access and movement.

To achieve a more place-based/integrated approach to road and street design, the following four core principles are promoted within the manual:

■   Connected Networks - To support the creation of integrated street networks which promote higher levels of permeability and legibility for all users, and with emphasis on more sustainable forms of transport;

■   Multi-Functional Streets - The promotion of multi-functional, place-based streets that balance the needs of all users within a self-regulating environment;

■   Pedestrian Focus - The quality of the street is measured by the quality of the environment for the user hierarchy as shown below in Figure 2-4 with pedestrians considered first; and

■   Multi-disciplinary Approach - Greater communication and co-operation between design professionals through the promotion of a plan-led, multidisciplinary approach to design.
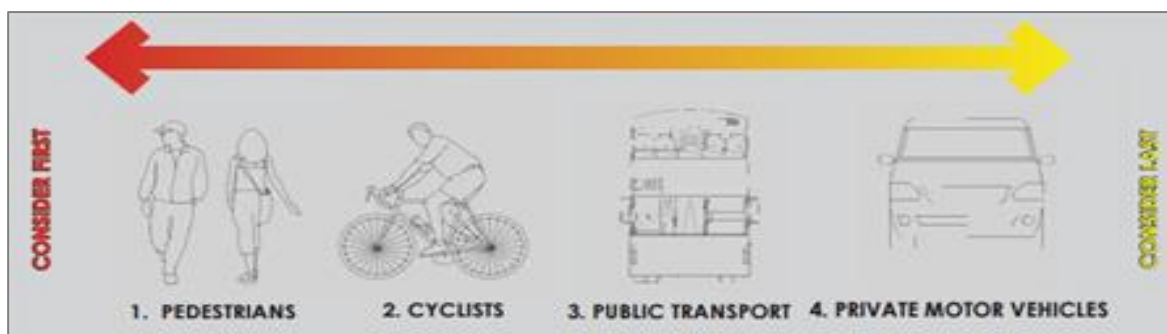

Figure 2-4 DMURS User Hierarchy

DMURS was updated in 2019 to take into consideration changes to government agencies, initiatives such as BusConnects and four new Advice notes relating to Transition Zones and Gateways, Geometric Standards, Materials and Specifications, and Quality Audits.

2.3.4 Permeability: A Best Practice Guide (National Transport Authority, 2015)

Permeability: A Best Practice Guide sets out guidance on how best to facilitate demand for walking and cycling in existing built-up areas. The scope extends to linkages for people to walk and cycle from their homes to shops, schools, local services, places of work and public transport stops and stations. For the purposes of the guidance, permeability is defined as the extent to which an urban area permits the movement of people by walking or cycling. Characteristics of a permeable environment are highlighted as follows:

- Interconnected pedestrian and cycle street network;
- Absence of high walls and fences segregating housing areas and local/district centres;
- Absence of cul-de-sacs for pedestrians and cyclists; and
- Secure, well-lit, overlooked pedestrian and cycle links between housing areas and between housing and local/district centres.

2.3.5 Spatial Planning and National Roads: Guidelines for Planning Authorities (Department of Environment, Community and Local Government, 2012)

Spatial Planning and National Roads: Guidelines for Planning Authorities sets out planning policy considerations relating to development affecting national primary and secondary roads, including motorways and associated junctions, outside the 50-60 km/h speed limit zones for cities, towns and villages.

The guidelines aim to facilitate a well-informed, integrated and consistent approach that affords maximum support for the goal of achieving and maintaining a safe and efficient network of national roads in the broader context of sustainable development strategies, thereby facilitating continued economic growth and development throughout the country.

The following Key Principles have informed these guidelines:

- Land-use and transportation policies are highly interdependent;
- Proper planning is central to ensuring road safety;
- Development should be plan-led;
- Development Management is the key to Plan Implementation; and
- Planning Authorities and the National Roads Authority (now Transport Infrastructure Ireland) and other public transport bodies must work closely together.

2.3.6 Achieving Effective Workplace Travel Plans Guidance for Local Authorities (National Transport Authority, 2013)

Achieving Effective Workplace Travel Plans Guidance for Local Authorities aims to assist local authorities in fully integrating the principles and practice of Workplace Travel Plans into both the development plan process and the development management process.

The guidance advocates either a 'Standard' Workplace Travel Plan or a Workplace Travel Plan 'Statement' be assessed on a case by case basis with consideration taken of the location, scale of development, nature of the uses proposed and anticipated impact on the surrounding area, in terms

of trip volume and congestion. As an indicative threshold, a 'Standard' Workplace Travel Plan should be required if an existing or proposed development has the potential to employ over 100 persons.

2.3.7   National Cycle Manual (National Transport Authority, 2011)

The National Cycle Manual promotes safe traffic environments for all road users including cyclists. It underlines the importance of integrating cycle travel opportunities in the planning and designing of new developments at all levels of the network including the strategic level, the route planning level and at design level. It provides technical information on the design of junctions, roundabouts, crossings and so on to ensure the optimum balance between the various modes and road functions is reached.

The manual subscribes to the five core principles of Sustainable Safety which are:

- Functionality;
- Homogeneity;
- Legibility;
- Forgivingness; and
- Self-awareness.

The National Cycle Manual is expected to be updated in the coming years but will remain relevant guidance until such stage as it is superseded.

2.4   Regional and Metropolitan Level

2.4.1   Regional Spatial and Economic Strategies (RSES) (Southern Regional Assembly, 2020)

The Waterford Metropolitan Area lies within the Southern Regional Assembly area. The Southern Regional Assembly, established on 1st January 2015, is one of three regional assemblies in Ireland along with the Northern and Western, and the Eastern and Midland regional assemblies. They incorporate the functions of both the former regional authorities and assemblies, with significant enhancement of some powers, particularly in relation to spatial planning and economic development. The Assemblies are, *inter alia*, charged with the preparation of RSES for their regions.

The RSES is a link between the NPF, the City and County Development Plans and the Local Economic and Community Plans. The RSES for the Southern Region came into effect on 31st January 2020 and, through the provision of a Waterford Metropolitan Area Strategic Plan (MASP), outlines strategic priorities for the Waterford Metropolitan Area (WMA) to ensure it can fulfil its strategic function as a driver for growth in the South-East Region. The delivery of the Waterford Metropolitan Area Transport Strategy and an integrated multi-modal transport network is recognised as a key priority.
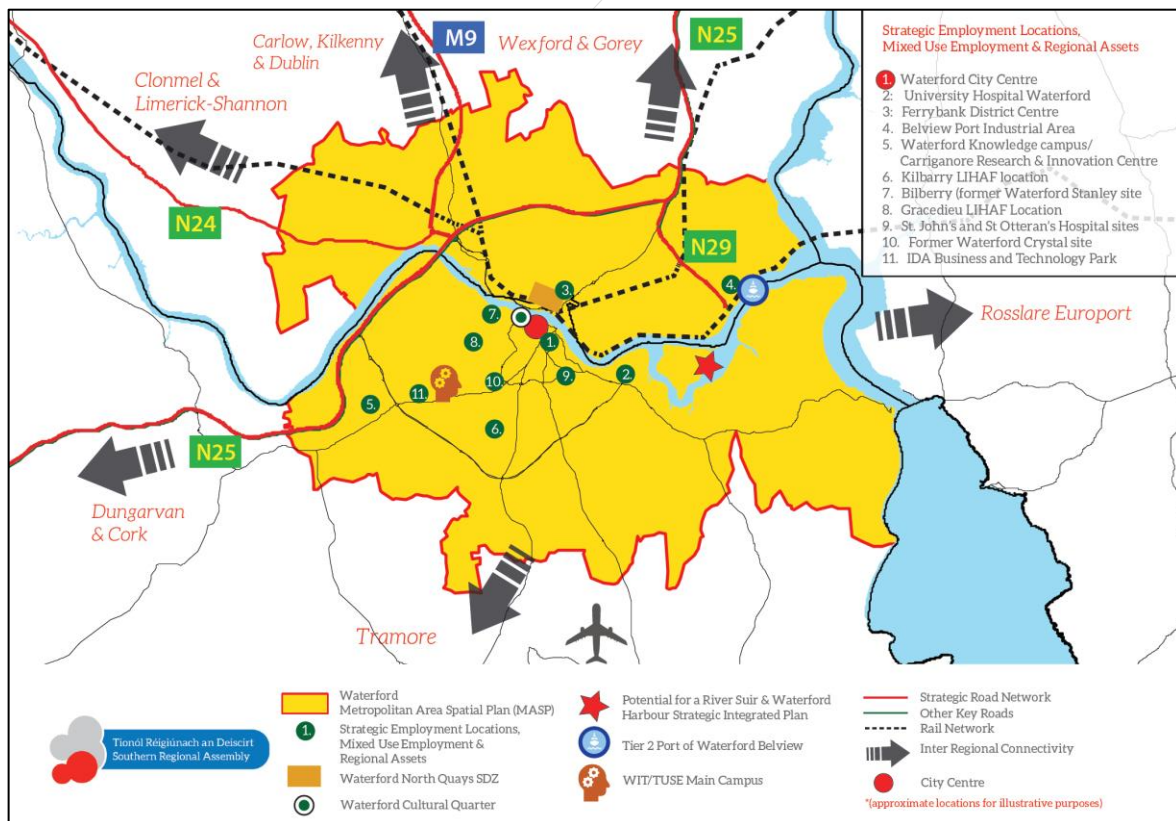

Figure 2-5 Waterford Metropolitan Area Strategic Plan. Source: RSES 2018

2.4.2 Waterford Metropolitan Area Strategic Plan (WMASP) (Southern Regional Assembly, 2020)

RSESs are developed to co-ordinate local authority plans at a strategic and regional assembly level. However, the area of the Assemblies is too broad to be able to sufficiently focus on city and metropolitan issues. Accordingly, in tandem with and as part of the RSES process, the NPF stipulates that five coordinated MASPs for the Dublin, Cork, Limerick-Shannon, Galway and Waterford Metropolitan Areas will be prepared.

In line with the RSESs, the MASPs will be provided with statutory underpinning to act as 12-year strategic planning and investment frameworks for the city metropolitan areas, addressing high-level and long-term strategic development issues.

The RSES for the Southern Region came into effect in January 2020 and includes a MASP for the Waterford Metropolitan Area (WMA). WMATS, in combination with the RSES for the Southern Region and the MASP for the WMA, provides the basis for regional planning in the Waterford area, which is also informed by the national policy objectives within the NPF 2040 and the NDP. The Waterford MASP contains extensive reference to the integration of land use and transportation, with specific reference (p180) as to how the preparation of the Waterford Metropolitan Area Transport Strategy will be instrumental in the regeneration and transformation of Waterford.

The Vision Statement for the Waterford Metropolitan Area is as follows:

Waterford aims to be a dynamic, concentric, modern European city of scale and significance, a UNESCO Learning City, driving national and regional growth, prosperity, innovation and creativity which is supported by focused investment in transformational rejuvenation across the Metropolitan Area, a vibrant and diverse University City with a high quality of life for all through a high standard of physical and community infrastructure and housing options, education, amenities and opportunities for employment.

The Waterford MASP highlights the development of a concentric city, along with key housing locations including:

■ The city centre regeneration areas,

■ The development of the North Quays SDZ;

■ The development of under-used land and buildings in inner urban areas; and

■ New residential development within and adjacent to the existing built-up area.

Key transport priorities identified in the Waterford Metropolitan Area Strategic Plan (p180) include:

■ Preparation of the Waterford Metropolitan Area Transport Strategy;

■ Target growth along high-quality public transport corridors and nodes linked to the delivery of key public transport projects;

■ Relocation of the Railway Station to the North Quays Innovation District with more direct access to the city centre;

■ Improved connectivity between the city centre and the North Quays Innovation District and wider Ferrybank area including the provision of a pedestrian / public transport bridge;

■ Development of the 10-minute city concept for Waterford;

■ Implementation of an integrated, multi-modal public transport network across the Metropolitan Area servicing strategic residential and employment growth locations;

■ Development and promotion of existing intercity rail and commuter links from Waterford to Dublin and Limerick, together with Kilkenny, Carlow, Newbridge, Clonmel, and Limerick Junction; and

■ Retention of the Waterford to Rosslare rail line for future freight and passenger rail connectivity for Rosslare Europort.

2.5 City and County Development Plans

2.5.1 Waterford City and County Development Plan 2022-2028: Strategic Issues Paper (Waterford City and County Council, 2020)

The Waterford City and County Development Plan 2022-2028: Strategic Issues Paper was published in 2020 to take over the expired Waterford City Development Plan 2013-2019 and Waterford County Development Plan 2011-2017 and become the first Development Plan for the consolidated areas of Waterford City and County. The plan is currently at pre-draft phase, with the draft Plan to be released soon. The Waterford City and County Development Plan 2022-2028 aims to create "a city and county of significance, driving regional growth and prosperity, realising its full potential on behalf of the local, regional and national population. A sustainable, dynamic and resourceful place where people choose to visit, live, work, invest, experience and socialise in, as a matter of choice". Some key aspects of this document include:

■ Creating an efficient strategic transport system for the future economic, social and physical development of Waterford;

■ Transitioning to a low carbon and climate resilient society;

■ The relocation of Plunkett Station within the development of the North Quays;

■ Creating a sustainable transport bridge linking the North and South Quays; and

■ Sustainable development of Waterford Port and Waterford Airport.

The Waterford City and County Development Plan 2022-2028 is expected to be implemented in 2022. Until this Development Plan is adopted, the Waterford City Development Plan 2013-2019 and the Waterford County Development Plan 2011-2017 will remain in place.

2.5.2 Waterford City Development Plan 2013-2019 (Waterford City Council, 2013)

The Waterford City Development Plan 2013-2019 seeks to "achieve a balance of travel supply and demand in Waterford" and acknowledges that greater integration of land-use and transportation planning is key to achieving this. Some of the strategic goals which are relevant to the Strategy are summarised as follows:

■ Align land-use development along well-serviced public transport corridors including bus lanes, rail lines and high-quality cycle and pedestrian infrastructure;

■ Public transport network improvements including increased service frequency on some routes, simplification of the network, provision of more direct routes to the city and the co-ordination of timetables;

■ Extension of bus services to the Rail Station and Kilbarry;

■ Provide for a small-scale park and ride site adjacent to the Outer Ring Road in the general Farronshoneen / Williamstown Road area, as well as an additional two park and ride sites on the Northern and Southern approaches to the City;

- Provide a citywide cycling network via main routes, along with providing cycle and walking networks between neighbourhood areas; and
- Control the provision of on-street and off-street car parking in the City Centre.

2.5.3 Waterford County Development Plan 2011-2017 (Waterford County Council, 2011)

The Waterford County Development Plan 2011-2017 seeks to 'develop and improve, in a sustainable manner the social, economic, cultural and environmental assets of the County'. There is emphasis on land-use within the County.

- Promote and improve the attractiveness of using public transport, cycling, walking, journey-sharing, flexible working or a combination of these as alternatives to one person per car-based journeys to work;
- Promote and facilitate the improvement and further development of the public transport system in the County;
- To support and co-operate with public and private transport operators in the provision of an effective, attractive and sustainable transport service;
- Liaise with Waterford City Council and the National Roads Authority on the provision of park and ride facilities, quality bus corridors and other appropriate traffic management measures in the City Environs;
- Assess the potential of a commuter rail service for Tramore and Kilmeaden; and
- Promote the sustainable development of safe and convenient pedestrian and cycling facilities in the towns and villages to encourage an active and healthy lifestyle.

2.5.4 Pre-Draft Issues Paper Kilkenny County Development Plan 2020-2026 (Kilkenny County Council, 2020)

The Pre-Draft Issues Paper was available for public consultation in April 2018 to inform the next Kilkenny County Development Plan (now expected to cover the period 2021-2027). The Plan is currently at pre-draft phase, with the draft Plan to be released in Q3 2020. The Kilkenny County Development Plan 2020-2026 aims to 'maximise the strengths of our citizens, communities, built and natural heritage, infrastructure and tourism to their full potential' and to 'create a more inclusive, attractive, competitive and safe city and county'. Some of the key information from the document includes:

- Ferrybank has been included as part of Waterford's Gateway settlement hierarchy;
- Ferrybank has the potential capacity for population growth in the region of 12,600;
- The Belview Port area has significant existing capacity for expansion; 190 hectares are zoned for development as a strategic employment location;
- Consider the provision of integrated scheduling of connections between all transport – rail, bus, and shipping services;
- Rail connectivity between Waterford and Dublin through County Kilkenny needs to be improved to provide for commuter services;
- An examination of the Rosslare to Limerick rail line;
- Create good physical connections within surrounding areas to encourage walking, cycling and public transport; and

■ Achieve the highest standards possible in urban and architectural design.

2.5.5   Kilkenny County Development Plan 2014-2020 (Kilkenny County Council, 2014)

The Kilkenny County Development Plan 2014-2020 aims to "provide a strategic policy focus to ensure adaptation measures are taken across different sectors and levels of government to reduce Ireland's vulnerability to the negative impacts of climate change". Some of the key aspects of the Kilkenny County Development Plan include:

■ To investigate the establishment of a Transport Forum to oversee transport policy of the county;

■ Promoting cycling and walking as efficient, fast and relatively inexpensive forms of transport;

■ Co-operate with the various public and private agencies responsible for transport services within the county in the provision of new bus services and supporting infrastructure;

■ Increased frequency of services and reduced journey times between Waterford, Kilkenny, Carlow and Dublin; and

■ Co-operate in the development of a high-quality bus-based public transport system in the Waterford City & Environs and in the identification of an optimum site for a Park and Ride facility.

Until the updated Kilkenny County Development Plan 2021-2007 is adopted, the Kilkenny County Development Plan 2014-2020 will remain in place.

2.6   Local Level Policy and Guidance

2.6.1   Ferrybank Belview Local Area Plan 2017 (Kilkenny County Council, 2017)

The Ferrybank Belview Local Area Plan 2017 has a vision to "ensure that the people of the Waterford City Environs in County Kilkenny enjoy a good quality of life with a high standard of education, excellent employment prospects and easy access to a full range of social, economic and cultural services". The Local Area Plan provides objectives relevant to transport, including:

■ Zoning of lands closest to core public transport routes should be giving preference;

■ Provision of a rail-passenger platform on the North Quays as part of a new Public Transport interchange;

■ Development of a high-quality bus-based public transport system in the City supported by Park and Ride facilities located north and south of the River linking with the Belview Port area;

■ Prioritisation of pedestrians, cyclists and public transport due to the downgrading of the Belmount Road to a Regional Road; and

■ To facilitate greater flexibility for public transport by bus routes in the future.

2.6.2   Waterford City Centre Urban Renewal Scheme 2015 (Waterford City and County Council, 2015)

The Waterford City Centre Urban Renewal Scheme plans to create changes to "traffic circulation, restriction of vehicular access, widening of carriageways, conversion to two-way or one-way traffic flows, ancillary civil works and realignment" of some streets. Some objective of this scheme includes:

■ Retention of Waterford's Healthy City status;

■ To protect and enhance the vibrancy and vitality of Waterford City Centre;

- To facilitate and promote the balanced and sustainable economic development of the City;
- To facilitate the development of an accessible city centre, with reference to persons with disabilities, pedestrians and cyclists;
- To provide a citywide cycle network to link all areas of the city to each other via main routes;
- To provide cycle and walking networks between neighbourhood areas; and
- To ensure that the growth of the city takes place in an orderly manner that is sustainable in terms of integrated land use, transportation and provision of infrastructure.

2.6.3 Waterford North Quays Strategic Development Zone Planning Scheme 2018 (Waterford City and County Council, 2018)

The vision for the Waterford North Quays Strategic Development Zone (SDZ) is to "promote the expansion of the City Centre to the north of the River Suir in a manner that enhances and supports balanced and sustainable growth in Waterford City and encourages its vitality and viability." Some of the key objectives which are relevant to the strategy include:

- To link the north and south side of the City by providing a new sustainable transport bridge crossing and improve accessibility and connectivity by creating an environment that facilitates internal pedestrian and cycle movements;
- To provide sustainable transport hub on the North Quays;
- To provide for sustainable patterns of movement and access with priority for pedestrians, cyclists and public transport; and
- To provide sustainable infrastructure and services for future populations.

2.6.4 Transforming Waterford: Integrated Transport Proposal (Waterford City Council, 2017)

Transforming Waterford: Integrated Transport Proposal seeks to 'deliver an urban centre that can be a real driver for regional development and a centre of consequence'. Regarding the document, the following key messages have been identified:

- A redevelopment of the North Quays, the iconic Ard Rí and Michael Street sites;
- A unique pedestrian friendly City Centre;
- A city with the only truly integrated transport hub; and
- A dedicated walking and cycling route traversing throughout the whole city.

2.6.5 Planning, Land Use and Transportation Study 2004 (Waterford City Council and Kilkenny County Council, 2004)

The Planning, Land Use and Transportation Study (PLUTS) was adopted by Waterford and Kilkenny Councils in 2004 and seeks to "provide a vision and strategy for the development of Waterford City and Environs up to the year 2020". A key element of the document is to achieve the 'critical mass to allow the city to reinforce and develop its role as the economic driver of the South-East region of Ireland'. Some of the core provisions which are relevant to the strategy include:

- A population increase of almost 30,000 people (or 57% population growth) in Waterford City and Environs;
- Investment needs for almost 12,800 new jobs;

- Requirement for approximately 11,500 new dwellings, predominantly to the north of the River Suir;

- Retail expansion of the city centre;

- The creation of a city centre bridge for pedestrians and cyclists to link the redeveloped North Quays with the city centre;

- Provision of a rail-passenger platform on the North Quays as part of a new public transport interchange; and

- Development of a high-quality bus-based public transport system in the city, supported by park and ride facilities.

2.6.6 Cycle Network Plan for Waterford City and Environs (Waterford City Council, 2014)

The Cycle Network Plan for Waterford City and Environs sets out the envisaged cycling network for the Waterford Metropolitan Area (WMA) based on 2023 demand levels and forms the basis for funding and delivery of the cycle network. The study is an important component in Waterford City and County Council's vision of developing a cycling culture within the WMA.

The Cycle Network Study has been developed in keeping with the important Smarter Travel objectives, i.e. 10% of all trips will be by bike.

There are many existing barriers to cycling through the Metropolitan Area, including watercourses such as the River Suir, St. Johns River and Kilbarry Bog, lack of permeability in residential areas, railways lines and a motorway.

This Study identified four sectors: North-East Sector, Western Sector, Southern Sector and City Centre. The main trip generators along these corridors include:

- University Hospital Waterford;

- Waterford City and County Council;

- Plunkett Rail Station;

- Bus Station and Rapid Bus Stop;

- City Square Shopping Centre;

- Waterford Institute of Technology;

- Waterford Institute of Technology West Campus; and

- The Deise Greenway.

An analysis of cycling conditions within the WMA is presented in more detail in Chapters 5-7.

2.6.7 Tramore Local Area Plan 2014-2020 (Waterford City and County Council, 2014)

The Tramore Local Area Plan 2014-2020 aims to ensure that "Tramore is easily accessible to all groups of society and is adequately serviced in terms of public transport and alternative private transport modes." Some of the goals of this plan which are relevant to transport include:

- Encourage the creation of cycle and pedestrian friendly communities;

- Ensure cycle lanes are provided throughout the town;

- The provision of an IMP type bus service in Tramore Town from the promenade to Church Street;

- Enhance the facilitation of new bus stop, taxi and shelter infrastructure;

- Co-locating of transport service provision to ensure interchange between services; and
- Support the Rural Transport Initiative.

2.7   Other Policy Documents/Guidelines/Studies

Several other policy documents, guidelines and studies were reviewed as part of this policy review report. These policy documents include the following:

- The National Mitigation Plan;
- National Spatial Strategy 2002-2020; and
- Trans-European Transport Network (TEN-T) Policy Documents.
- Waterford City & County Council Noise Action Plan 2019-2023.

2.8   Summary of Policy Context

This chapter outlined a summary of some of the key National, Regional, City and County and Local level plans and policies relevant to the preparation of this Strategy.

Much of the above is representative of the development objectives of Waterford City and County Council and Kilkenny County Council as articulated in their respective Development Plans. These will be considered in the preparation of the strategy through the strategy appraisal process, which will assess each transport scheme against and agreed set of objectives.

3 Study Area and Existing Development Patterns

3.1 Study Area Definition

The Study Area has been defined by the Department of Housing, Planning and Local Government to include the continuous built-up area of Waterford City and Suburbs (as defined by the CSO). It also includes the following settlements;

- Cheekpoint;
- Passage East; and
- Slieverue.

The population of the Waterford Metropolitan Area is over 59,854 (CSO, 2016) and covers 143km^2 of which 85.05 km^2 is in Waterford City and County Council and 57.60 km^2 is within Kilkenny County Council.

Waterford City is the largest urban centre in Ireland's South-East region and the country's fifth largest city. Waterford City and Suburbs is also the fifth largest centre of employment in the country with significant employment levels associated with Waterford City Centre, Waterford University Hospital, Waterford Institute of Technology, the pharmaceuticals sector and retail.
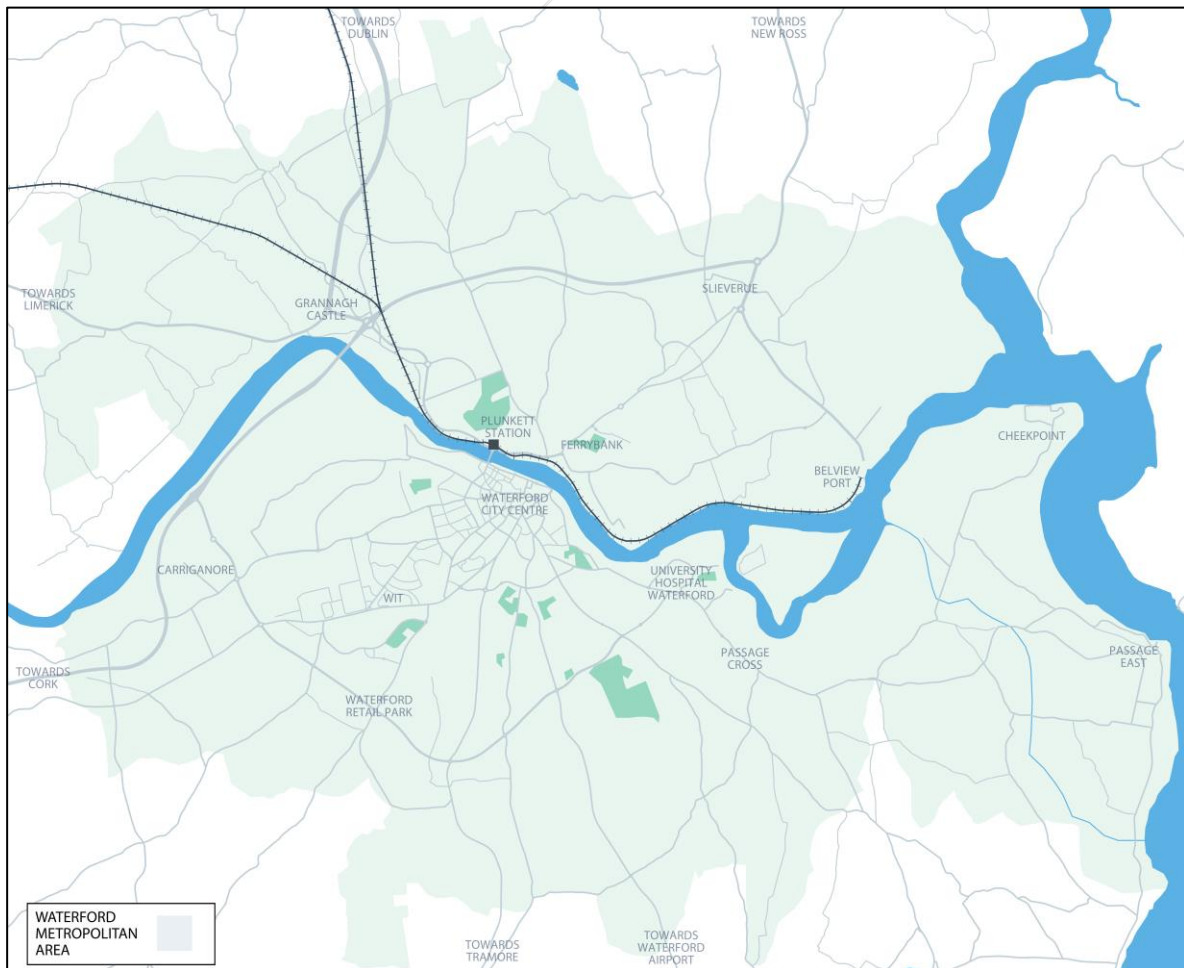

Figure 3-1 Waterford Metropolitan Area Boundary

Waterford City is home to Waterford Institute of Technology (WIT) which is located to the south and west of the City Centre. WIT has over 10,000 students enrolled with approximately 1,000 people employed across the different campuses in the city.

The Waterford Greenway is a nationally and regionally significant visitor attraction generating more than 248,000 visitors per annum. It is understood that Waterford City and County Council wish to extend the Greenway to Waterford City with the intention of significantly increasing visitor numbers. The House of Waterford Crystal is another important visitor centre generating over 190,000 visitors per annum.

Waterford and its wider Metropolitan Area is served by Intercity rail services; city, regional and expressway bus/ coach services; and Waterford Airport is located approximately 10km to the south-east of the City Centre. Existing public transport services will be discussed in more detail in Sections 5, **Error! Reference source not found.** and 6 of this report.

3.2 Existing Development Patterns

3.2.1 Population

The Waterford Metropolitan Area was estimated to have a population of 59,479 in 2016, i.e. an increase of 3.3% since 2011. Approximately 86% of this population is within Waterford County and the remaining 14% in Kilkenny county. A total of 89% lies within the city and suburbs, 80.7% on the Waterford side and 8.4% on the Kilkenny side. The population by area and population percentage breakdown are presented in Table 3.1 and Figure 3-2 below.

Table 3.1 Breakdown of Waterford Metropolitan Area Population*

Area	2011 Population	2016 Population	2011-16 Growth
Waterford City and Suburbs (Waterford)	46,555	48,000	3.1%
Waterford City and Suburbs (Kilkenny)	4,641	5,015	8.1%
Waterford County Rural Areas	3,150	3,240	2.9%
Kilkenny County Rural Areas	3,239	3,224	-0.5%
Total	57,585	59,479	3.3%

*due to boundary difference between CSO settlement and small area the population figures reported above are marginally different from the total population reported for Waterford City and Suburbs by the CSO and the WMA figure within the MASP.

■ Waterford City and Suburbs (Waterford) ■ Waterford City and Suburbs (Kilkenny)

■ Waterford County Rural Areas ■ Kilkenny County Rural Areas
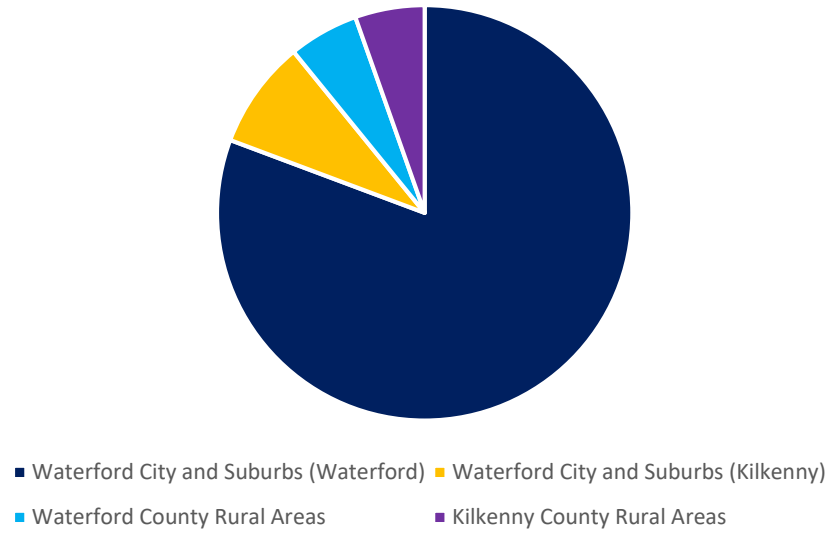
Figure 3-2 Population Percentage Breakdown – Waterford Metropolitan Area

Population density by CSO Small Area has been mapped for the Waterford Metropolitan Area as shown   in
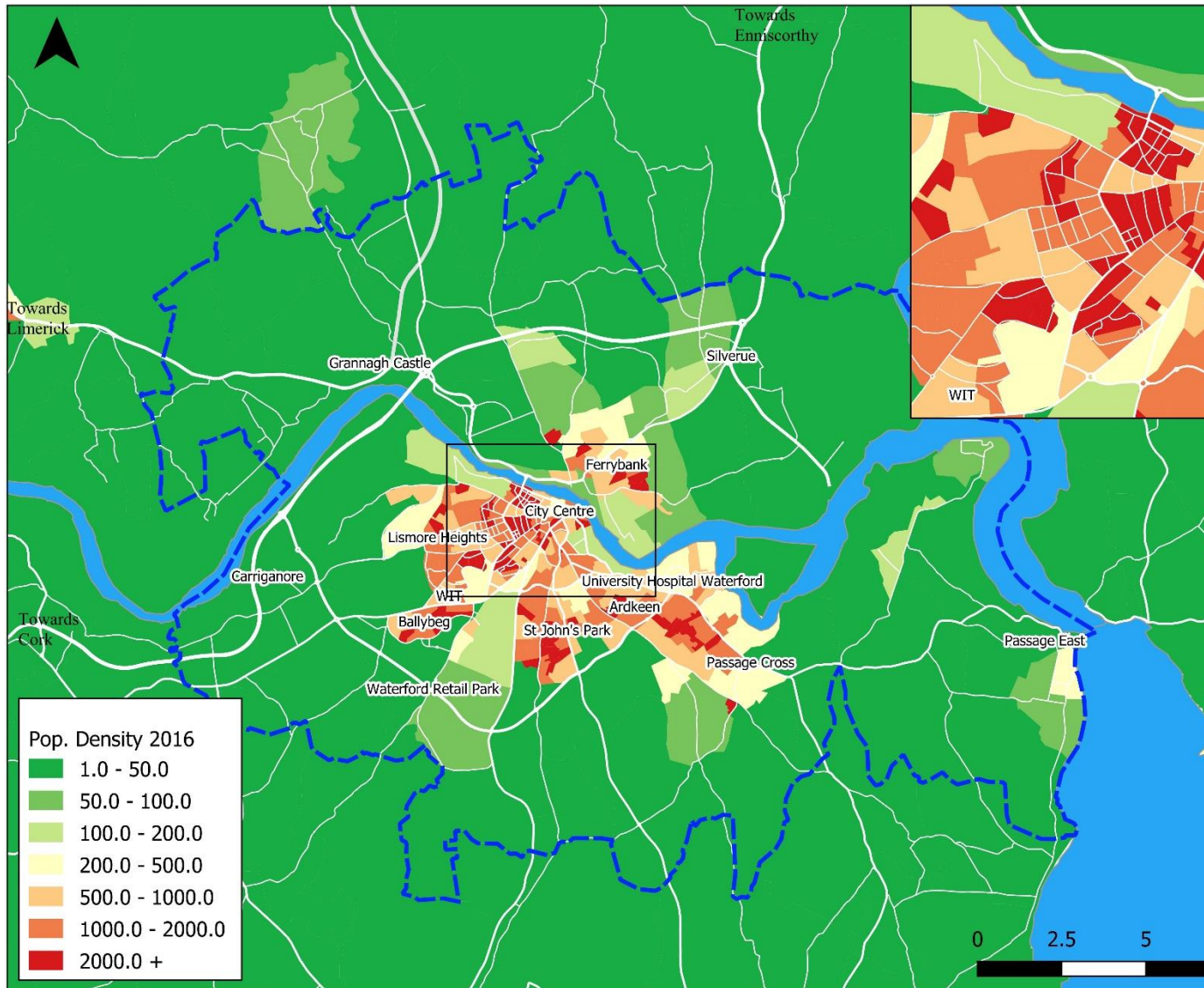
Figure 3-3. The map shows significantly higher population density within Waterford City Centre and, to a lesser extent, within Ardkeen, St. John's Park and Ferrybank.
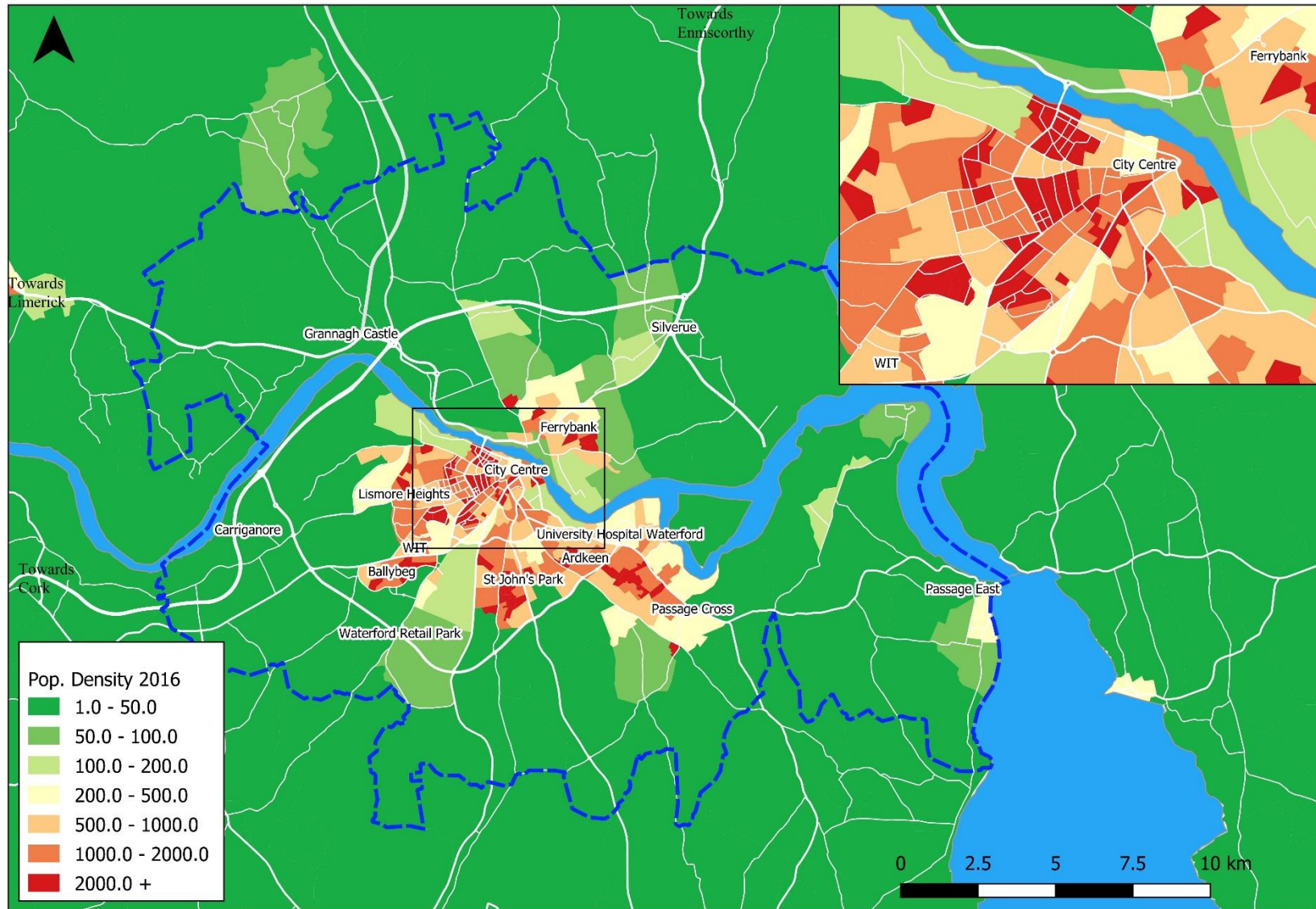
Figure 3-3 Waterford Metropolitan Area 2016 Population density (per square kilometre)

3.2.2 Employment

The graphics below present the distribution of jobs within the Waterford Metropolitan Area. **Error! Reference source not found.** shows the total number of jobs per CSO-defined Small Area and **Error! Reference source not found.** shows job density per small area.

Across the wider WMA, the most notable concentrations of absolute employment are within small areas containing the hospital, West Pharmaceuticals and Waterford Retail Park. In terms of employment density, there are higher densities of employment within the city centre.

Figure 3-4 Waterford Metropolitan Area 2016 Jobs per CSO Small Area

Figure 3-5 Waterford Metropolitan Area 2016 Jobs Density (per square kilometre)

Job Density 2016

- 1.0 - 10.0
- 10.0 - 50.0
- 50.0 - 100.0
- 100.0 - 200.0
- 200.0 - 500.0
- 500.0 - 1000.0
- 1000.0 +

4   Existing Transport Demand

4.1   Data Sources

4.1.1   Census Data 2016

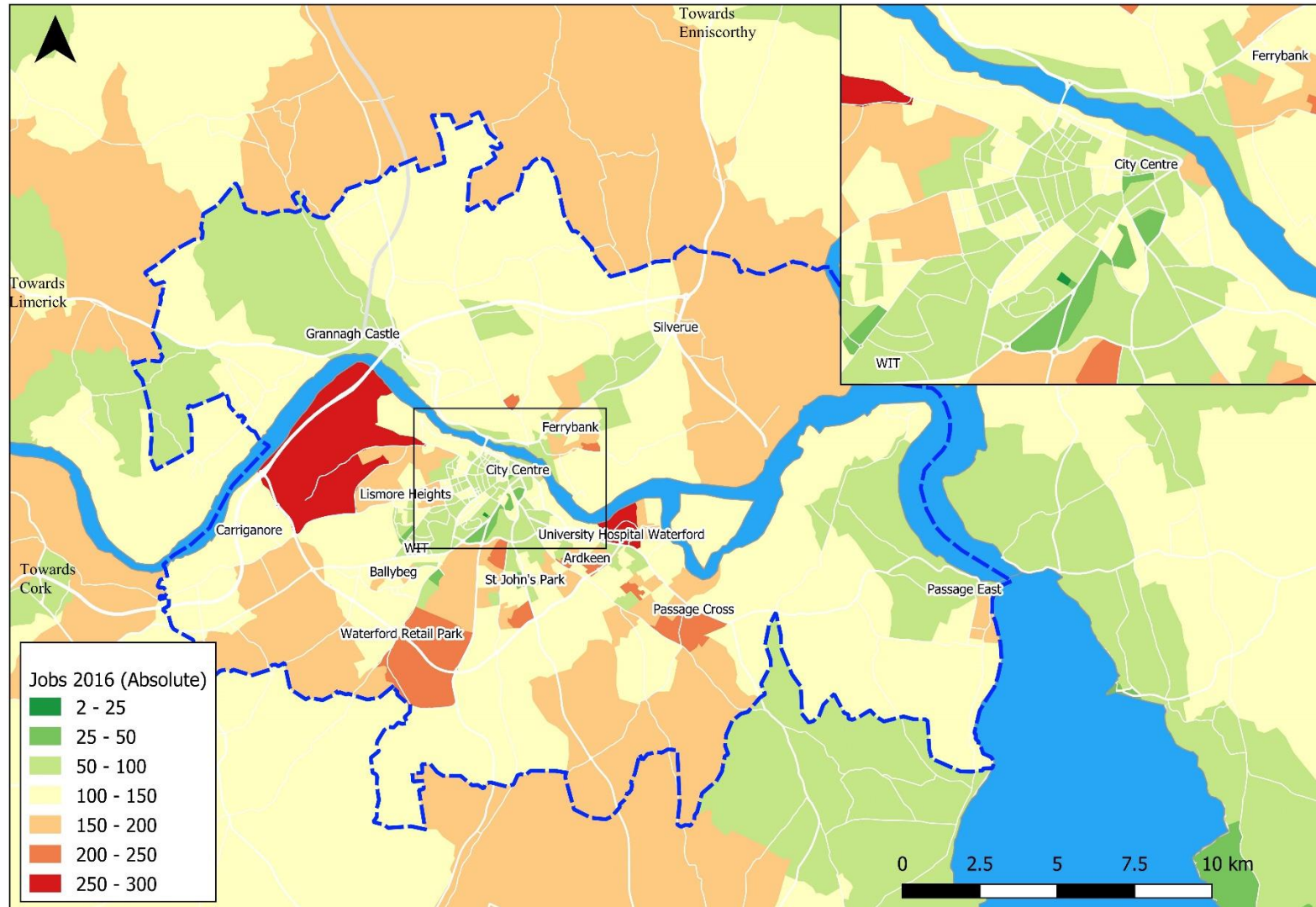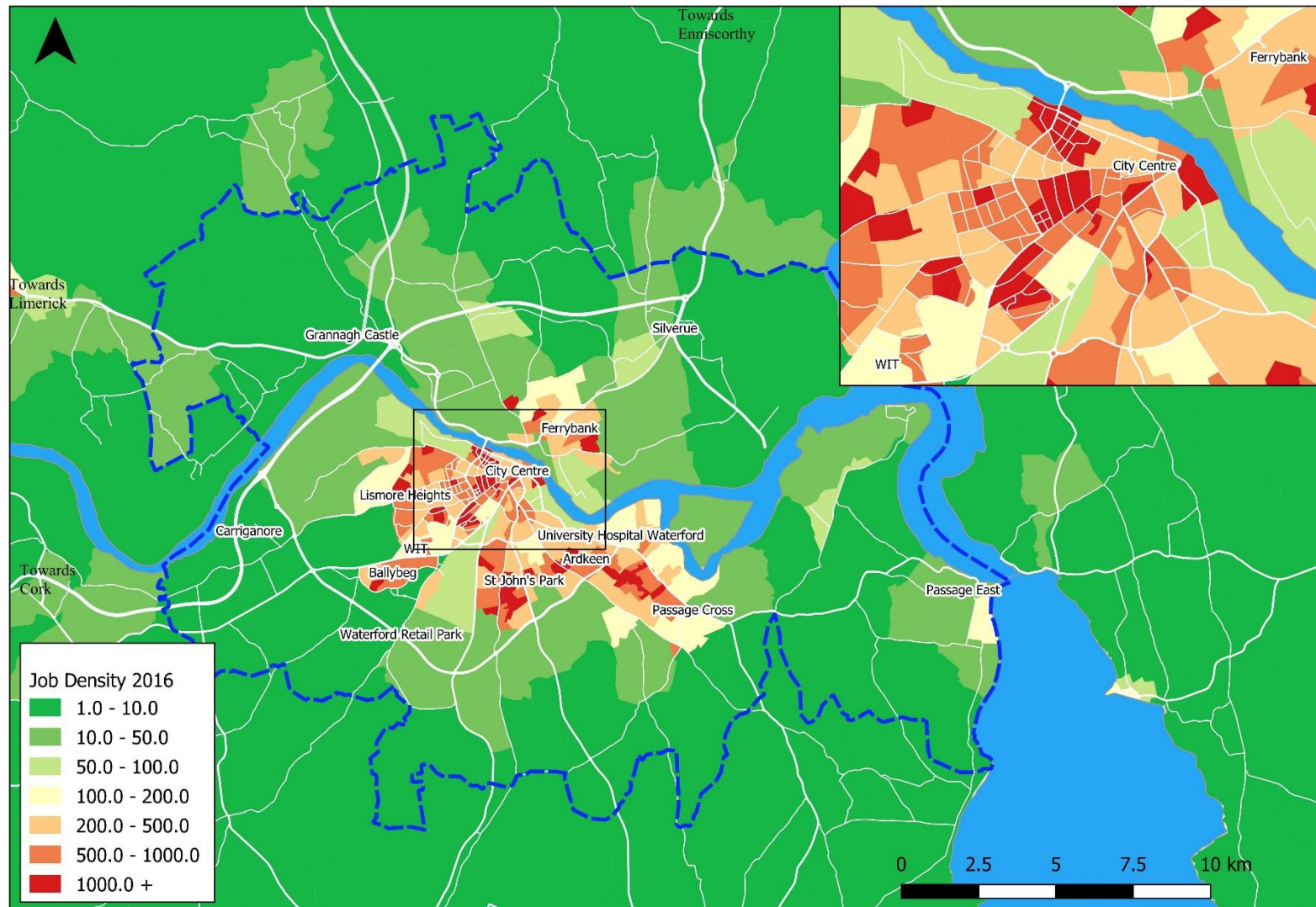The latest available census data is from 2016 and provides data on population and social demographics at a CSO Small Area level. In addition to population totals and demographics, the 2016 census delivers extensive information on commuting travel patterns for all work and education trips. This includes information on mode choice, time of departure, trip duration and destination choice which is collated as part of the Place of Work, School or College – Census of Anonymised Records (POWSCAR). Both the POWSCAR data and the small area population statistics are used in the calibration of the NTA's South-East Regional Model (SERM) discussed below in section 4.1.3.

4.1.2   2017 National Household Travel Survey

The NTA's National Household Travel Survey (NHTS) was carried out through two sources: a CAPI administered survey of each household and a 3-day travel diary of each person over 4 years old in that household. The NHTS had a total of 5,906 houses participating nationally. The main purpose of the survey was to obtain essential information on all-day travel patterns and travel behaviour across the country and to build on the information gathered during the 2006 Greater Dublin Area (GDA) Household travel survey.

The all-day travel data obtained from the NHTS was required to provide information on travel behaviour at off-peak times of the day when trips for purposes other than work or education become more significant and are not captured within POWSCAR. This data was used to inform the parameters used within the SERM and the calibration of the final demand.

4.1.3   South-East Regional Model

To examine the existing characteristics of demand within and to the Waterford Metropolitan Area, data has been extracted from the NTA's South-East Regional Model (SERM). The SERM is one of 5 regional models which comprise the NTA Regional Modelling System (RMS). The SERM covers the entire south-east region with detailed representation of the Waterford Metropolitan Area.

The model covers all surface access modes for personal travel and goods vehicles including private vehicles (taxis and cars), public transport (bus and rail), walking and cycling. The impact of the movement of goods is represented through the inclusion of goods vehicles within the highway element of the model.

The travel demand within the model is segmented according to trip purpose, car availability, employment type and educational level. The model represents an average weekday with five separate peak periods modelled:

- AM peak (07:00-10:00);
- Morning Inter peak (10:00-13:00);
- Afternoon Inter peak (13:00-16:00);
- PM peak (16:00-19:00); and
- Off peak (19:00-07:00).

The current release version of the SERM is calibrated to the 2011 Census Data. All data presented in this section of the report has been extracted from the 2016 base year model which was run with the 2016 Census planning data to reflect 2016 travel demand.

4.2 Existing Transport Demand Characteristics

4.2.1 Profile of Demand throughout the Day

In total, there are approximately 197,000 trips originating within the Waterford Metropolitan Area over the 24-hour period. The busiest periods in terms of total demand are the AM Peak, PM Peak and the afternoon inter peak. The percentage breakdown of demand between the five modelled periods is shown below in Figure 4-1.
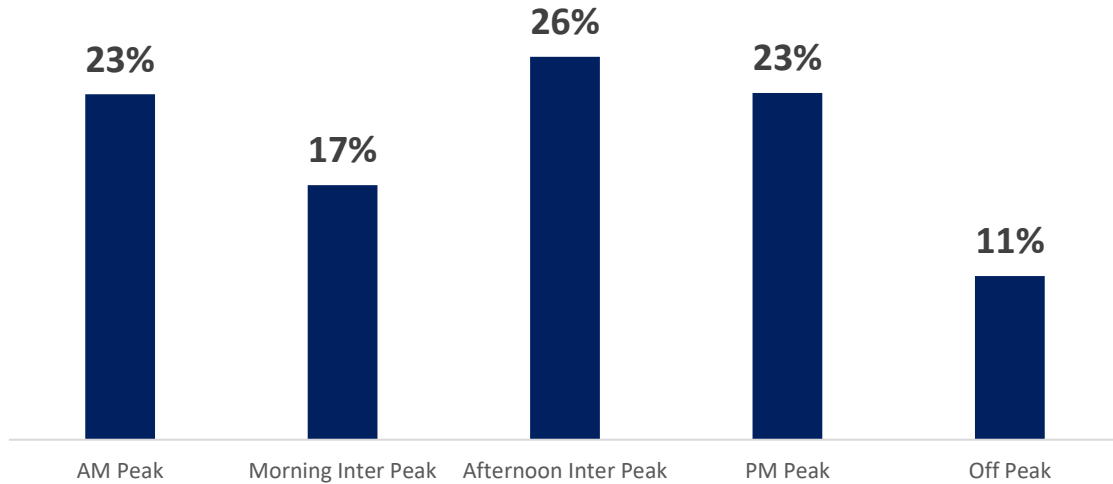
Figure 4-1 Percentage of demand by Time Period

4.2.2 Breakdown of Trip Purposes

Figure 4-2 below shows the breakdown of demand between trip purposes by each time period. The trip purposes defined are 'Food Shopping', 'Education' (including accompanying escort trips), 'Commute' trips and 'All Other Purposes'. The other purposes include visiting friends or relatives, leisure trips, business trips and non-food related shopping trips. All trips made by those in retirement are also classed as 'Other' trip purpose.
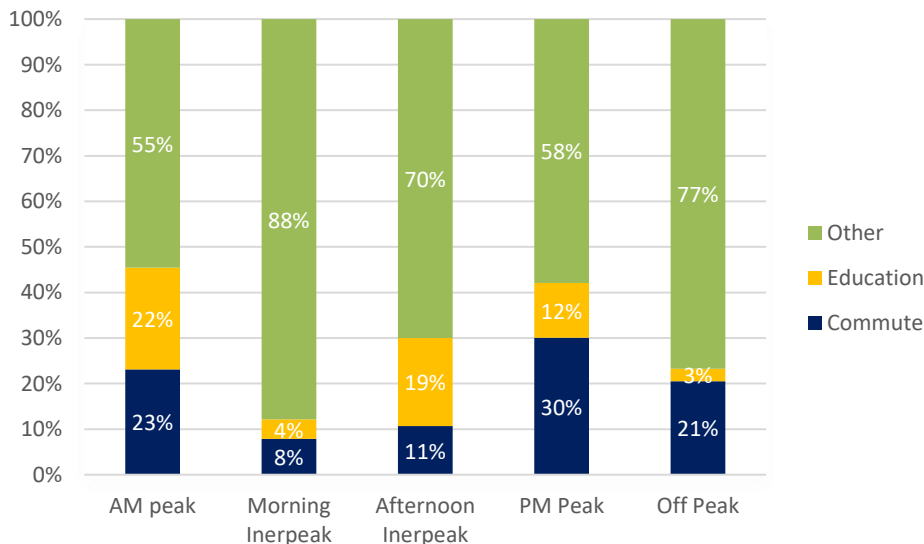
Figure 4-2 Percentage of Demand by Trip Purpose per Time Period in 2016

The breakdown of trip purposes shows that 45% of the morning peak's trips are made for commuting and education. This percentage is about 42% in the PM peak. During the rest of the day, the other trip purposes are dominant.

Overall, commuting to work and education accounts for 33% of 'all day' trips, and the other purposes for 67%, as shown in Figure 4-3 below.

■ Commute   ■ Education   ■ Other
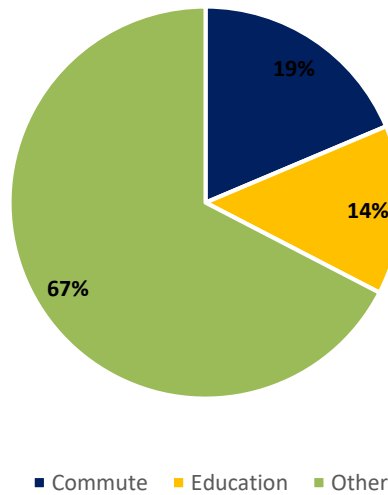
Figure 4-3 Percentage of 24-Hour Demand by Trip Purpose

4.2.3   Overall Mode Share

The overall mode share for the 24-hour demand, which is illustrated in Figure 4-4 below, shows a dominant car mode share of 64.6%. The second most popular mode is walking which represents 24.8% of all trips made in the day. Public transport is 10% with the cycling mode share just 0.6%.

■ Car   ■ Public Transport   ■ Walk   ■ Cycle
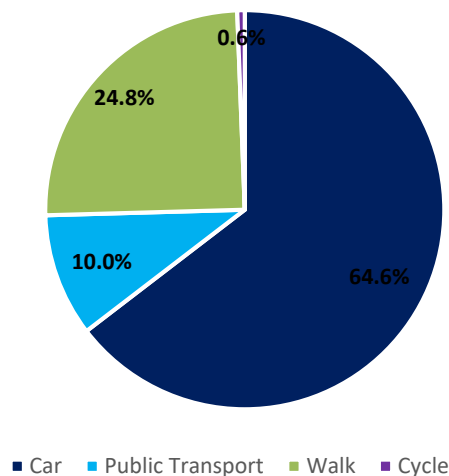
Figure 4-4 Metropolitan 24-Hour Mode Share Split

4.2.4   Mode Share by Area

The 24-hour mode share for the Waterford Metropolitan Area is presented in Figure 4-5 below. The car share is at a significantly lower level in the Waterford City and suburbs area than in the remaining Metropolitan Area. Significantly more trips are made by walking and public transport in Waterford city, reflecting the transport infrastructure and relatively short distances which make these modes more attractive. Cycle mode share is low in both areas.
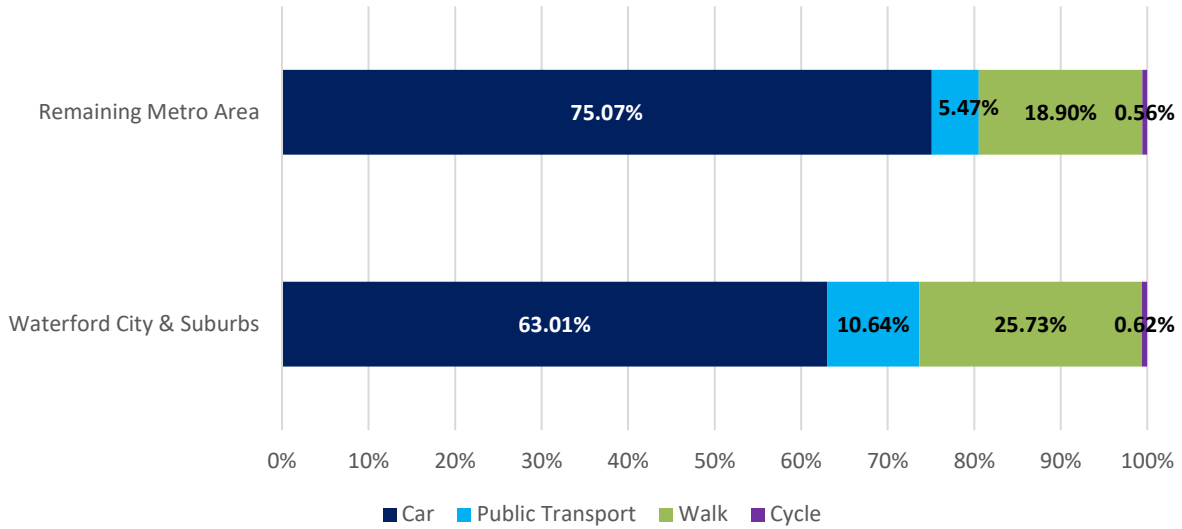
Figure 4-5 Metropolitan 24-Hour Mode Share Split by Area

A more detailed breakdown of the mode share by area is shown in the following figures which illustrate the car, public transport and combined walking and cycling (active) mode share for each SERM zone within the Waterford Metropolitan Area. The figures demonstrate the higher non-car mode share, overall, within the City.
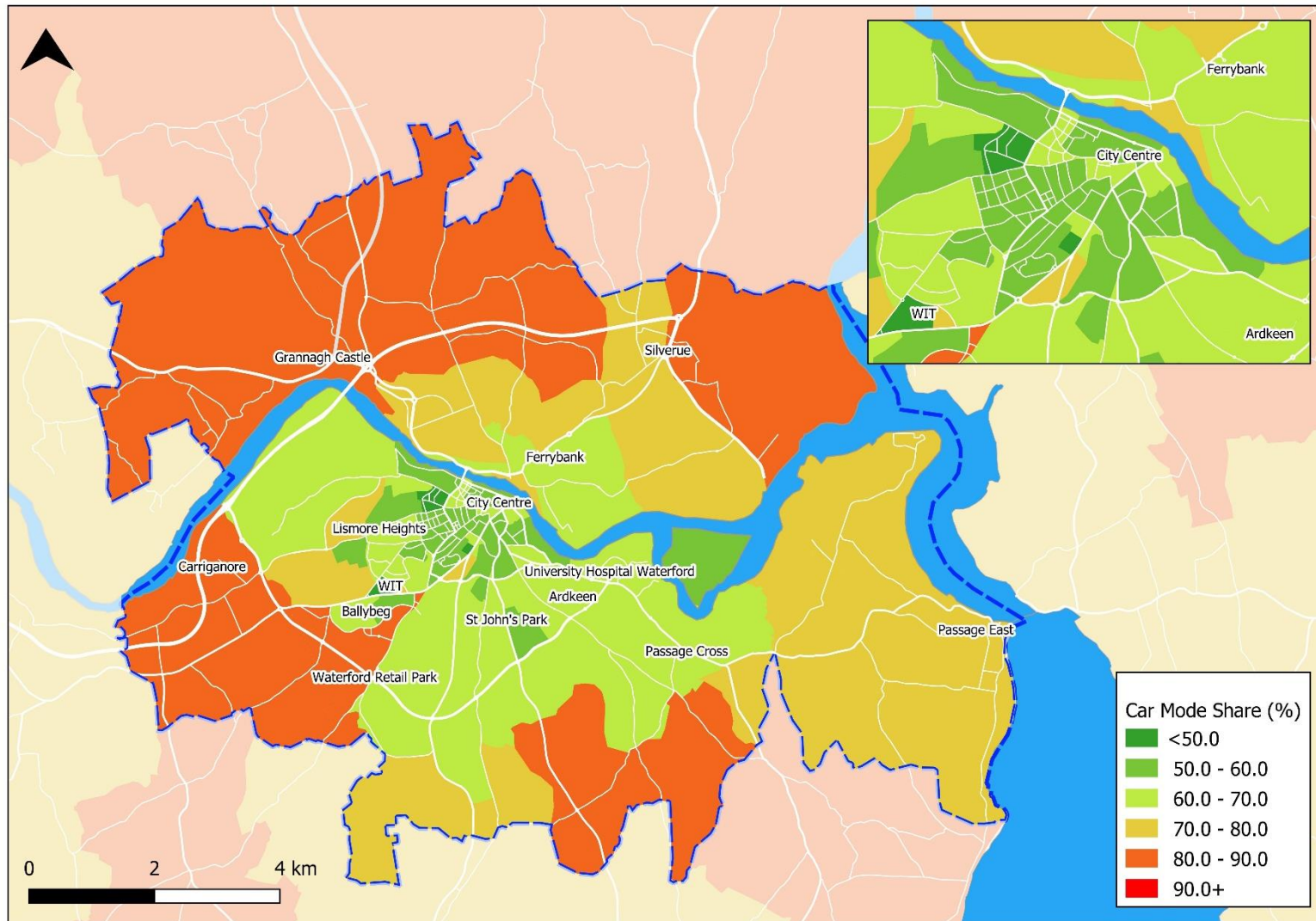
Figure 4-6 Waterford Metropolitan Area 24-Hour Car Mode Share by SERM Zone
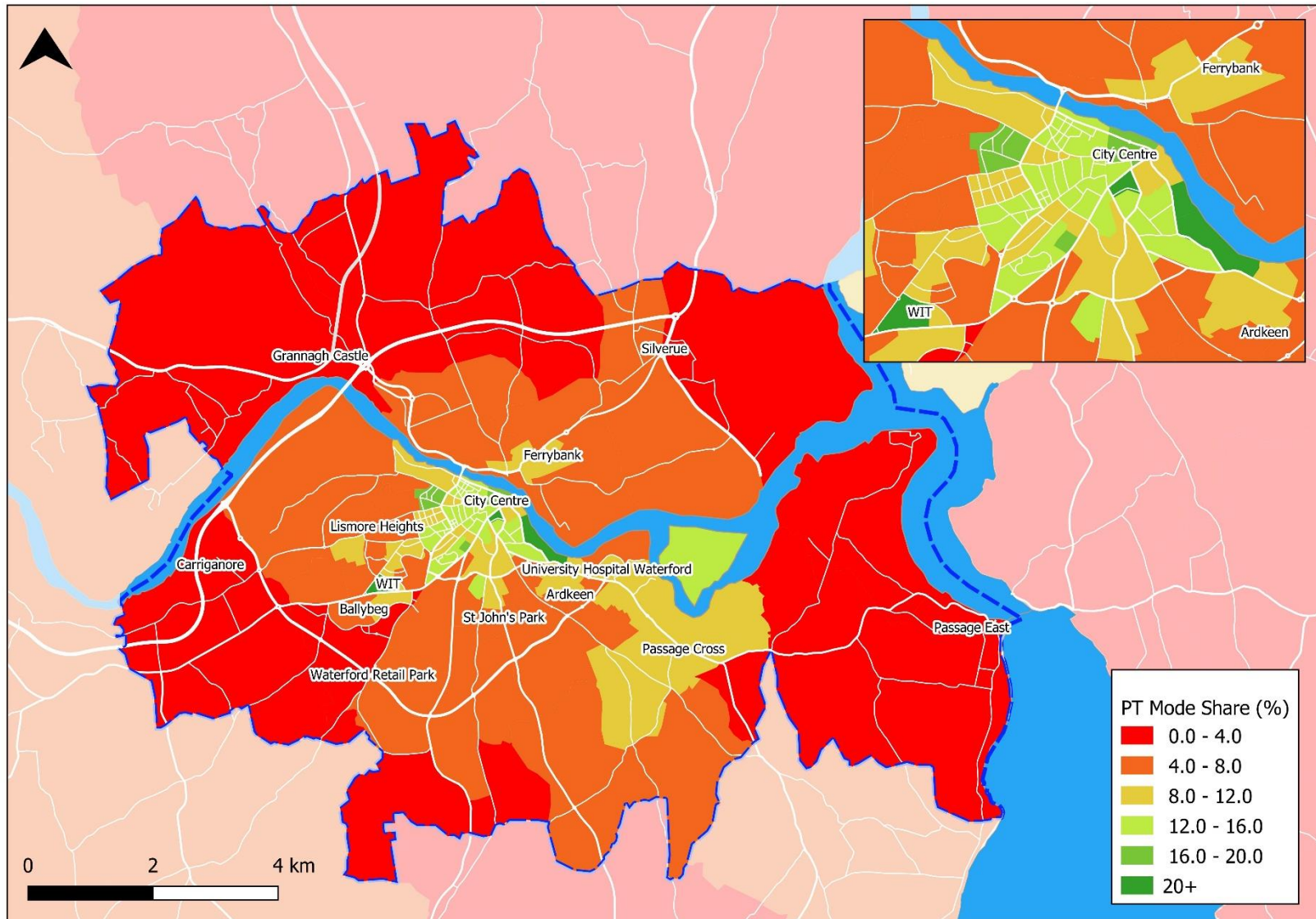
Figure 4-7 Waterford Metropolitan Area 24-Hour PT Mode Share by SERM Zone
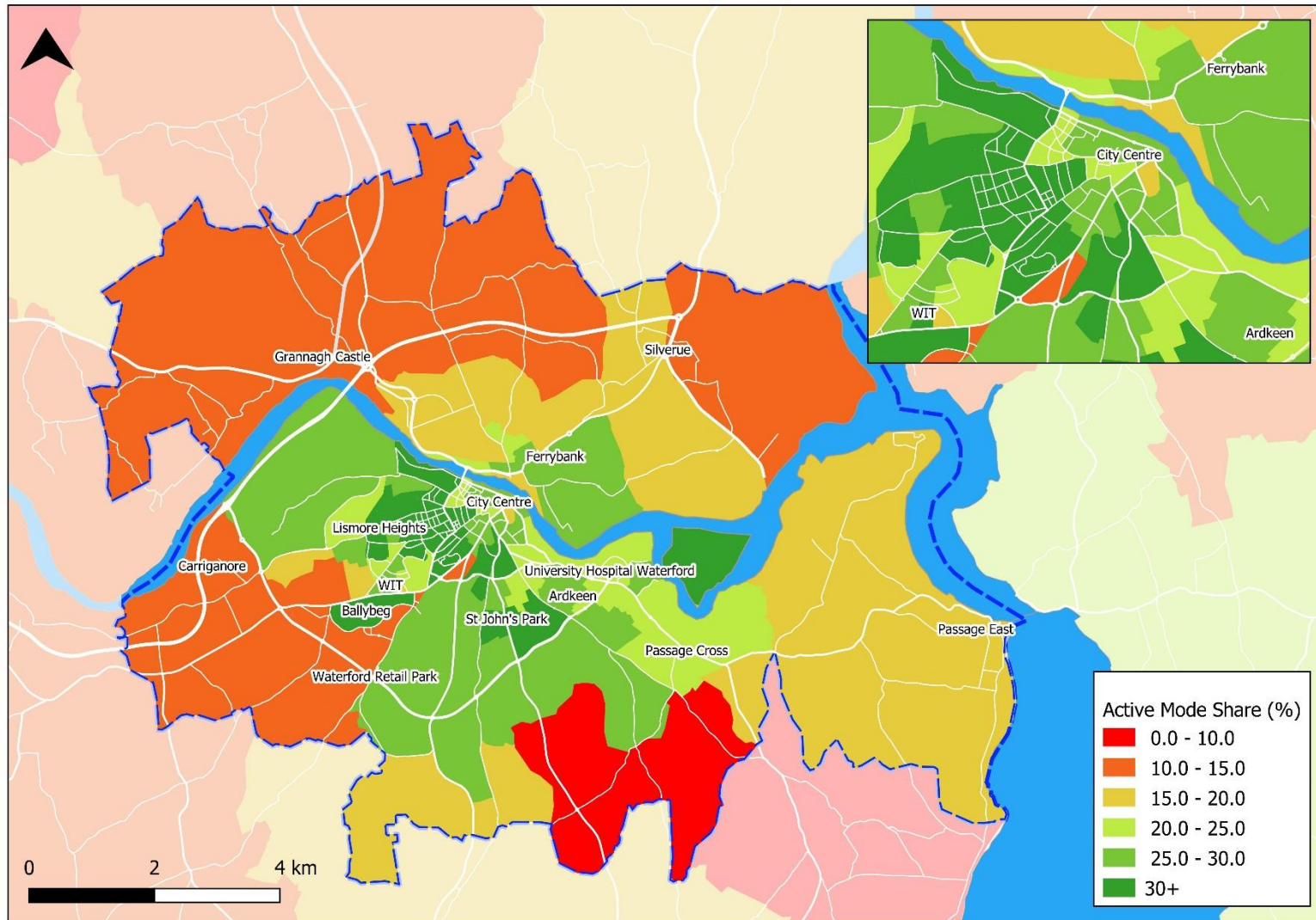
Figure 4-8 Waterford Metropolitan Area 24-Hour Active Mode Share by SERM Zone

4.2.5   Mode Share by Time Period

The distribution chart below shows the mode share for the Waterford Metropolitan Area by each time period. It appears that the Off-peak period (1900-0700) is most dominated by car mode share at around 74%. This contrasts with the AM peak when an increased number of walking trips and public transport trips are made.

Time Period	Car	Public Transport	Walk	Cycle
AM Peak	57.4%	10.6%	31.1%	0.8%
Morning…	60.7%	11.6%	27.1%	0.5%
Afternoon…	66.4%	10.7%	22.4%	0.5%
PM Peak	68.3%	9.7%	21.4%	0.6%
Off Peak	73.6%	4.8%	21.1%	0.5%

■ Car   ■ Public Transport   ■ Walk   ■ Cycle

4.3   Existing Transport Demand Movements Patterns

4.3.1   Key Origins and Destinations

The number of origin and destination trips by SERM model zone are shown in
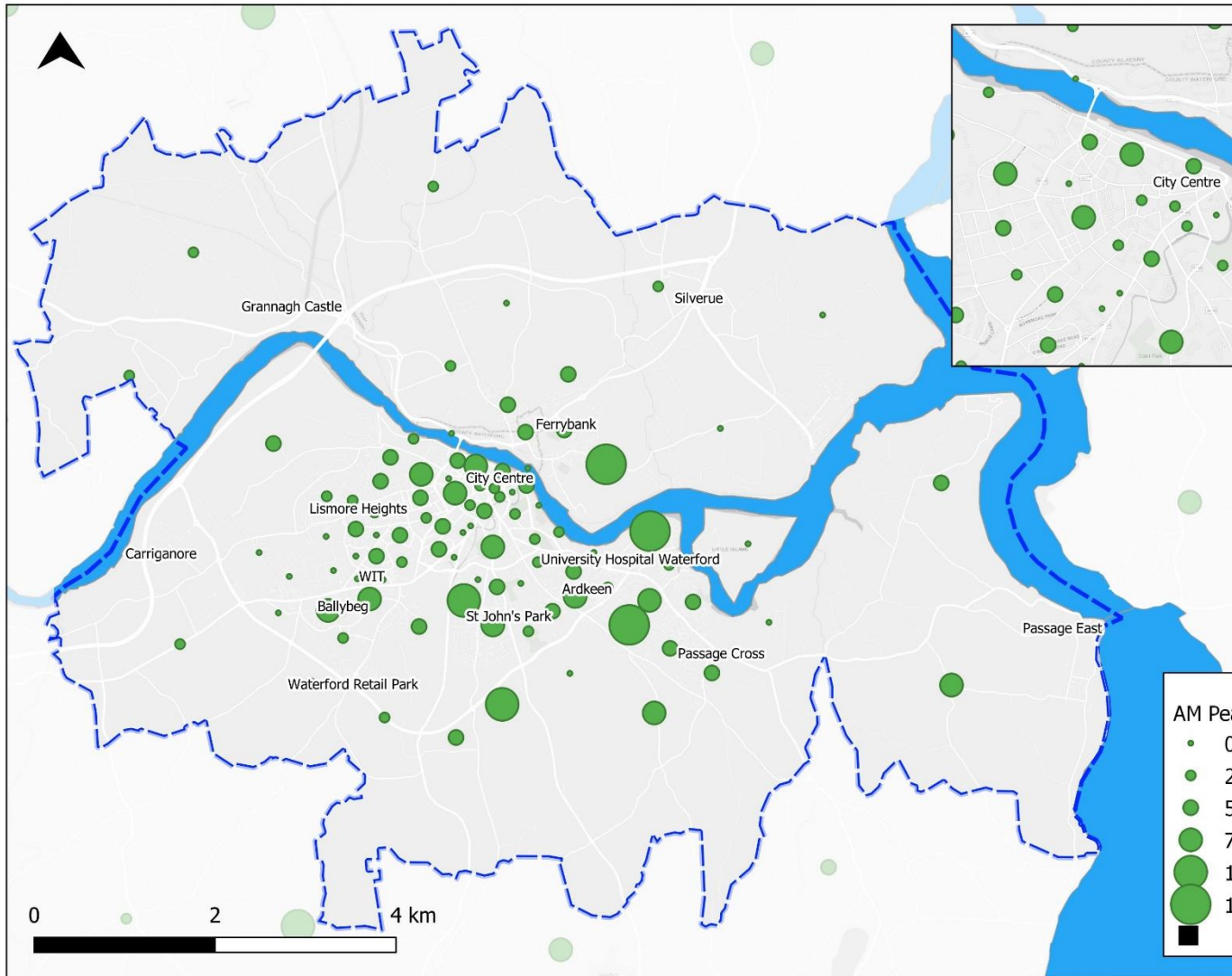
Figure 4-10 and **Error! Reference source not found.** respectively for the AM peak. The figures show demand originating from residential areas of Waterford City and its suburbs.

In term of destinations, demand is concentrated in the city centre of Waterford but also in zones covering the Hospital, WIT and Waterford Retail Park.

The demand at model zone level has also been aggregated to a sector level system which covers the key settlements within the Metropolitan Area. The origin and destination demand at a sector level is shown in **Error! Reference source not found. Error! Reference source not found.** for the AM peak.
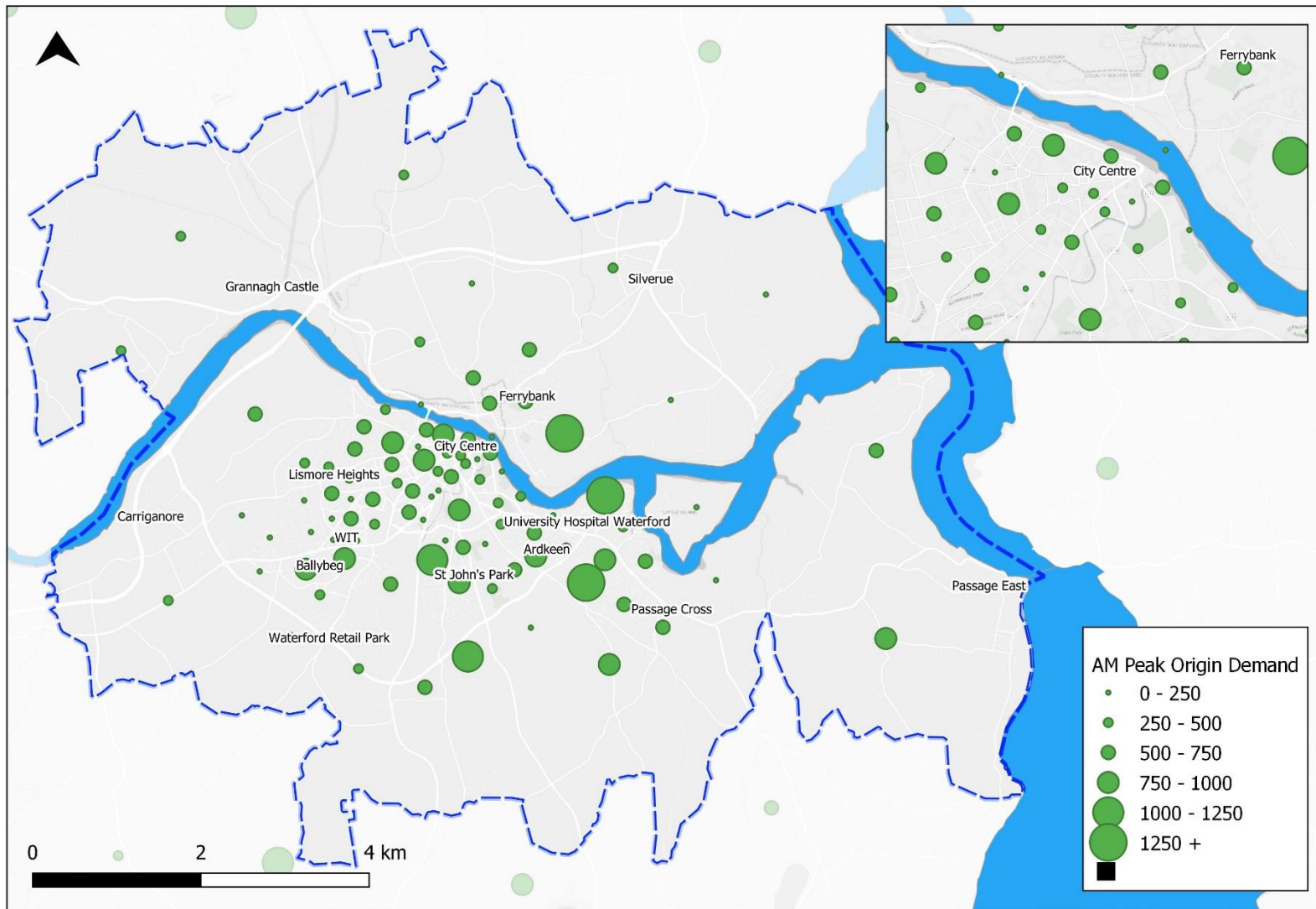
Figure 4-100 Waterford Metropolitan Area AM Peak Origin Demand by Zone
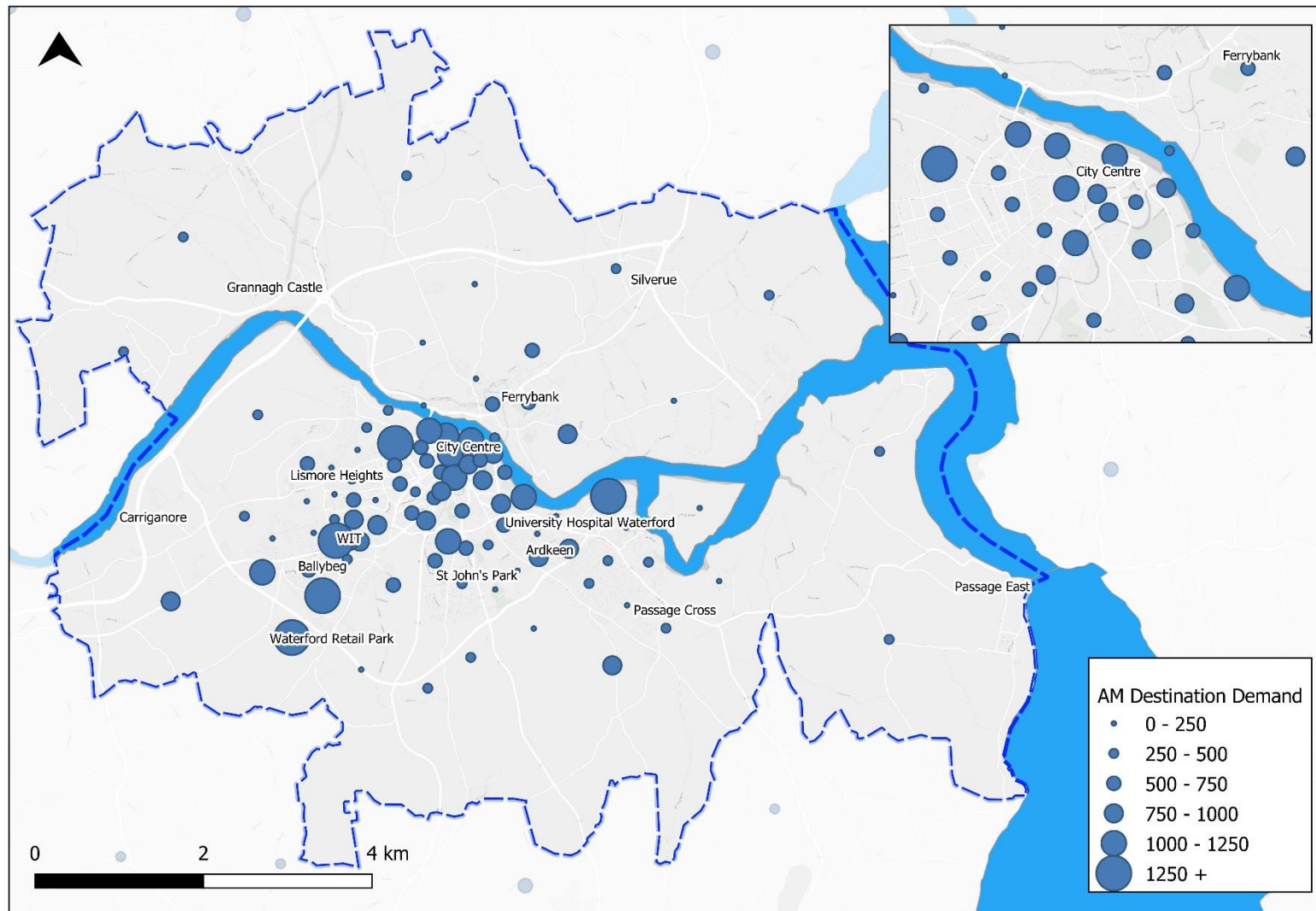
Figure 4-11 Waterford Metropolitan Area AM Peak Destination Demand by Zone

4.3.2   Sector to Sector Analysis

The movements between Waterford City, the remainder of the Metropolitan area and the remainder of the South-East region are summarised in Table 4.1 below. As shown above, much of the travel demand is mostly internal within the Waterford City and Suburbs. However, there is a significant influx of trips from the remainder of the SERM area with just under 50,000 trips made daily from outside the WMA into the Study Area.

Table 4.1 Total 24-Hour Demand

24-hour Demand		Destination		
		Waterford City & Suburbs	Other Metropolitan Areas	South East Region
Origin	Waterford City & Suburbs	121,274	11,288	40,810
	Other Metropolitan Areas	11,624	4,876	7,268
	Remainder of South East Region	40,636	7,109	/

A map, dividing the Metropolitan Area into sectors is provided in
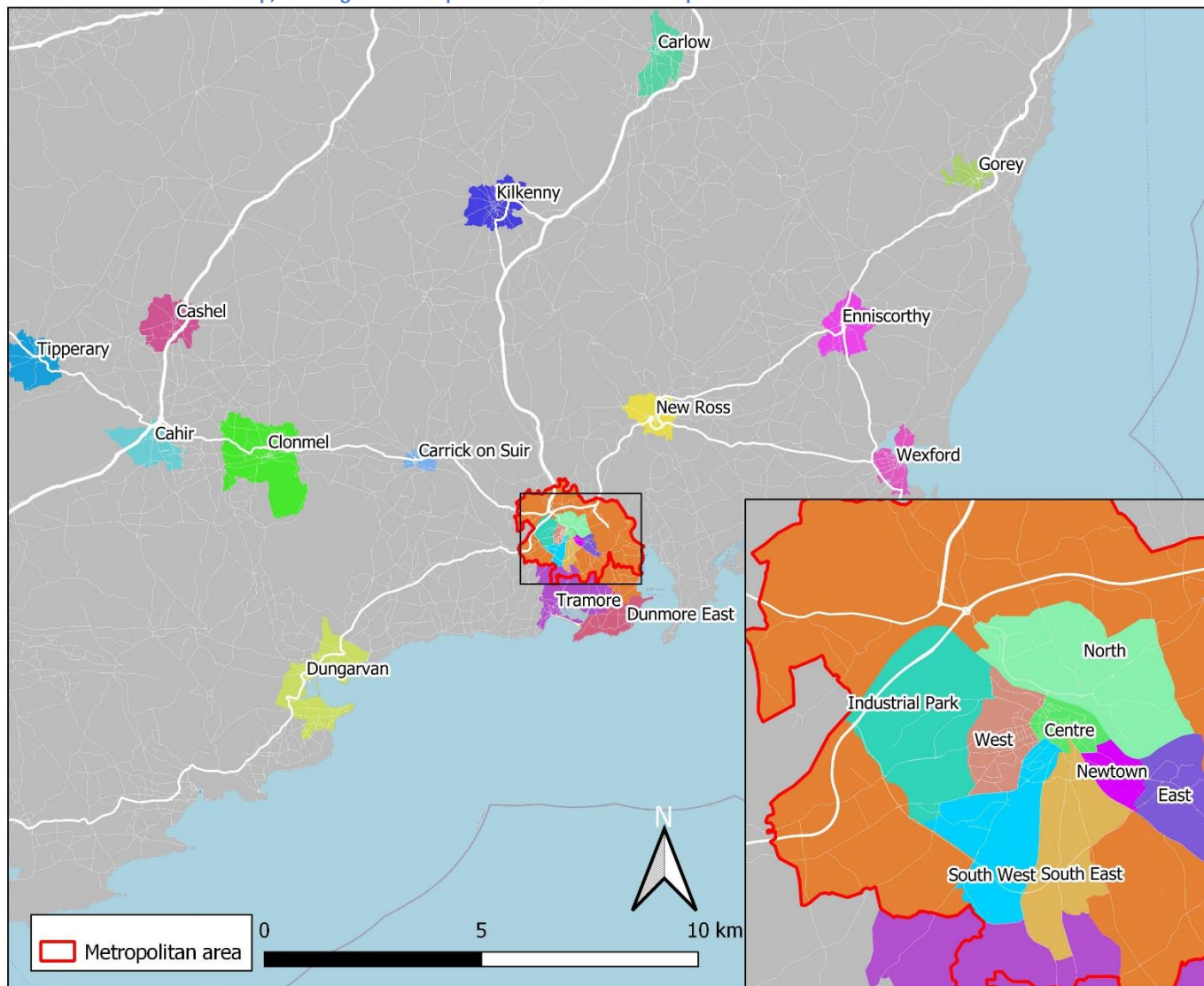
Figure 4-11 below. Sector to sector demand is presented in Tables 4.2 and Table 4.3 in a matrix format which outlines the key origin-destination movements within the Waterford Metropolitan

Area for the AM peak and 24-hour periods respectively. It should be noted that the sector system is based on the SERM zone system. Some settlement zones cover large greenfield and rural hinterland areas.

As shown, there is significant demand to and from Waterford City Centre, particularly from Waterford West which covers Ballybricken and South East which covers St. John's Park. Outside of the metropolitan area there is considerable demand for movement between the Metropolitan Area and Tramore and to a lesser extent Dunmore East.

Figure 4-11 Sector System used for Origin Destination Analysis

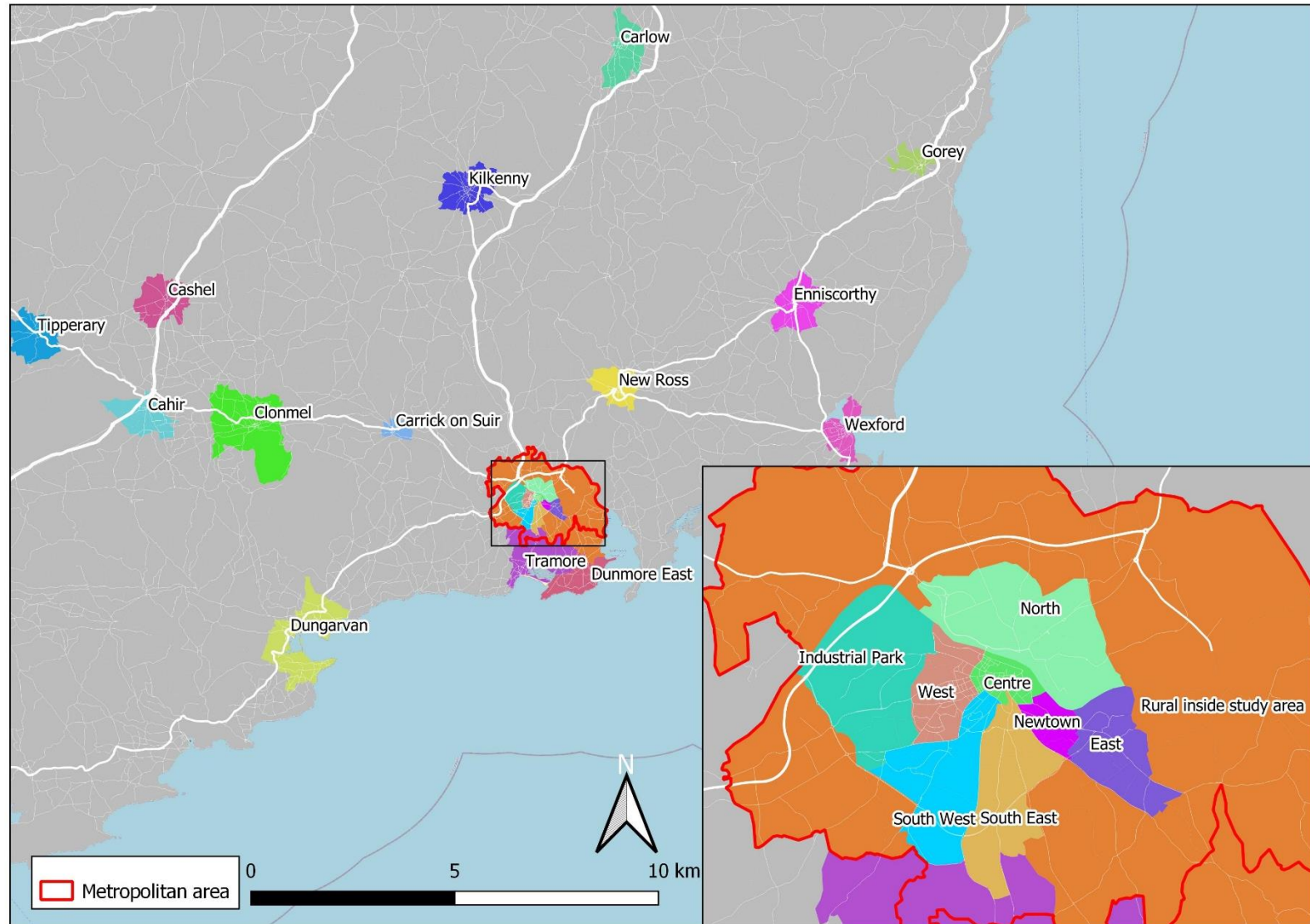| From\To	Waterford-Centre	Waterford-North	Waterford-West	East	NewTown	South East	South West	Industrial Park	Rural in Study Area	Tramore	DunmoreEast	Carlow	Carrick-on-suir	Cashel	Clonmel	Dungarvan	Enniscorthy	Gorey	Kilkenny	NewRoss	Wexford	Cahir	Tipperary	Total Origin
Waterford-Centre	2047	300	825	502	307	431	556	157	340	180	43	8	37	1	19	17	3	0	50	51	5	2	1	5884
Waterford-North	756	1118	475	191	144	134	267	122	406	67	11	8	28	1	18	12	4	0	46	63	8	1	1	3882
Waterford-West	1371	275	2285	377	254	406	773	344	394	179	28	7	31	1	19	22	3	0	47	46	6	2	1	6870
East	1088	154	543	1578	622	486	473	133	665	210	67	5	20	1	13	14	3	0	29	32	5	1	0	6144
NewTown	571	84	260	387	455	280	226	60	212	85	27	2	10	0	5	5	1	0	13	14	2	0	0	2701
South East	1245	143	828	521	467	1456	784	179	425	240	44	5	16	0	11	13	2	0	27	25	4	1	0	6437
South West	765	110	936	225	177	323	1019	178	271	165	23	4	18	0	11	16	2	0	25	24	3	1	0	4299
Industrial Park	237	55	336	56	49	69	121	161	89	51	7	2	8	0	5	7	1	0	11	11	2	0	0	1278
Rural in Study Area	837	325	553	593	342	309	431	179	1595	242	79	7	42	1	24	21	5	0	51	66	9	2	1	5714
Tramore	606	93	579	377	199	322	589	225	499		143	6	37	1	25	48	3	0	35	34	6	2	1	3828
DunmoreEast	170	26	109	153	85	88	118	39	154	233		1	6	0	5	6	1	0	7	7	2	0	0	1209
Carlow	13	4	9	3	3	3	5	2	5	3	0		5	1	4	1	22	5	385	15	6	0	0	494
Carrick-on-suir	116	38	121	35	21	23	74	39	75	38	5	10		11	299	33	1	0	112	15	2	17	6	1092
Cashel	2	1	4	1	0	0	2	1	2	1	0	2	9		308	5	0	0	20	0	0	138	133	629
Clonmel	44	14	68	14	9	10	33	16	27	18	2	7	224	247		93	1	0	101	7	2	362	86	1386
Dungarvan	76	19	158	30	16	21	80	45	59	56	5	2	39	6	140		1	0	11	9	2	10	2	787
Enniscorthy	7	4	7	3	1	2	4	2	5	2	0	45	1	0	1	1		116	23	88	548	0	0	860
Gorey	1	0	2	0	0	0	0	0	1	1	0	23	0	0	0	0	161		4	6	123	0	0	324
Kilkenny	75	25	74	22	12	15	43	20	38	16	2	552	45	11	63	4	11	1		56	7	4	3	1101
NewRoss	121	57	123	36	20	22	76	37	83	23	3	26	10	0	6	5	84	5	116		160	0	0	1014
Wexford	12	6	11	4	3	3	5	3	7	3	1	7	1	0	1	1	399	58	13	146		0	0	684
Cahir	5	1	11	1	1	1	5	2	3	2	0	1	15	185	527	9	0	0	9	1	0		102	881
Tipperary	2	0	3	0	0	0	1	0	1	0	0	0	4	148	117	2	0	0	6	0	0	104		392
Total Destination	10168	2853	8321	5110	3188	4405	5686	1945	5357	1814	492	730	608	617	1620	337	710	189	1139	719	902	647	337	57891

Table 4.2 Sector to Sector AM Peak Demand (07:00 – 10:00?) 2016

From\To	Waterford-Centre	Waterford-North	Waterford-West	East	NewTown	South East	South West	Industrial Park	Rural in Study Area	Tramore	DunmoreEast	Carlow	Carrick-on-suir	Cashel	Clonmel	Dungarvan	Enniscorthy	Gorey	Kilkenny	NewRoss	Wexford	Cahir	Tipperary	Total Origin
Waterford-Centre	9557	2200	4368	3283	1611	3203	2604	746	2284	1613	413	62	398	13	197	251	48	5	400	502	69	19	7	33853
Waterford-North	2243	3326	1311	796	421	557	699	308	1133	343	82	29	151	6	85	87	26	3	188	282	41	7	3	12125
Waterford-West	4685	1361	7619	1863	925	2139	2947	1108	1704	1390	255	43	307	13	185	338	33	4	312	374	50	22	7	27686
East	3016	738	1691	6441	1722	1906	1286	351	2173	1222	441	27	144	6	83	122	22	2	162	198	34	7	3	21797
NewTown	1762	436	939	1879	1674	1253	728	192	946	574	200	13	79	3	42	58	10	1	83	100	16	4	1	10993
South East	3272	561	2103	2007	1219	4593	1886	441	1278	1086	246	21	104	4	63	98	15	2	133	140	24	5	2	19301
South West	2829	725	2984	1426	721	1928	3771	550	1303	1383	259	26	195	8	107	207	21	2	187	229	29	11	4	18904
Industrial Park	801	315	1107	384	190	449	548	573	467	485	82	11	93	4	48	106	9	1	79	102	13	4	2	5870
Rural in Study Area	2434	1159	1696	2340	933	1306	1288	467	4876	1381	421	37	255	9	136	195	32	4	257	346	55	11	4	19643
Tramore	1692	346	1375	1298	554	1089	1342	477	1337		690	25	198	9	130	299	18	2	167	161	29	9	4	11252
DunmoreEast	400	78	242	453	188	237	244	79	408	676		4	29	1	20	33	3	0	28	28	8	1	1	3164
Carlow	60	28	40	29	12	20	24	11	36	25	5		48	8	34	9	202	73	2267	124	55	3	2	3113
Carrick-on-suir	411	146	293	154	74	101	182	90	234	188	29	46		64	1156	206	9	1	419	74	13	76	28	3994
Cashel	11	5	12	6	2	4	7	3	8	8	1	7	59		1290	37	1	0	109	3	1	719	687	2981
Clonmel	197	84	175	91	40	62	101	47	132	128	21	34	1192	1395		670	6	1	491	46	9	1862	555	7342
Dungarvan	253	85	326	128	54	96	198	105	191	289	35	9	206	41	678		6	1	56	50	10	62	20	2898
Enniscorthy	52	28	33	26	10	15	21	9	33	19	4	213	9	1	7	6		753	136	472	2407	1	0	4253
Gorey	5	3	4	3	1	2	2	1	4	2	0	74	1	0	2	1	742		24	39	524	0	0	1435
Kilkenny	343	170	265	163	70	119	157	69	225	149	27	2083	386	108	447	53	117	21		444	75	36	32	5559
NewRoss	533	285	360	223	97	141	221	101	335	162	31	130	78	4	48	52	462	39	517		790	4	2	4612
Wexford	75	43	49	40	16	25	29	13	57	31	9	58	14	1	10	10	2367	511	87	809		1	1	4256
Cahir	19	7	21	7	4	5	11	4	10	9	2	3	77	763	1889	62	1	0	39	4	1		489	3427
Tipperary	7	3	7	3	1	2	4	1	4	3	1	2	27	704	531	19	0	0	33	1	0	476		1830
Total Destination	34657	12129	27021	23041	10540	19252	18300	5747	19178	11167	3251	2956	4050	3165	7186	2921	4150	1428	6175	4526	4254	3339	1853	230286

Table 4.3 Sector to Sector 24 Hour Demand 2016

5 Existing Transport Networks – Waterford City and Suburbs

The following section outlines the existing transport networks, services and facilities within Waterford City and Suburbs by mode.

5.1 Road Network

5.1.1 National Road Network

The strategic road network is important for the movement of goods and services within the WMA. Maintaining the capacity of the roads with optimal levels of service is of critical importance for growing the economy of Waterford Metropolitan Area.

The National Road network provides the basis for Waterford's inter-regional and national-level connectivity. **Error! Reference source not found.** presents the existing road network in WMA and highlights the National Network. There are seven National Roads within the Waterford Metropolitan Area, four of which comprise the TEN-T (Trans European Network – Transport) Core and Comprehensive network.

- M9 Waterford – Dublin: Motorway;
- N24 Waterford – Limerick: National primary road;
- N25 Cork – Waterford – Rosslare: National primary road; and
- N29 Belview Port – Slieverue: National primary road.

5.1.2 Regional Road Network

The regional road network supports the national road network by providing connectivity with other national roads, and the local road network by creating links between urban centres, neighbourhoods and suburbs. Key regional routes within Waterford City include:

- R448 Newbridge – Waterford (radial route);
- R675 Dungarvan – Waterford (radial route);
- R680 Clonmel – Waterford (including Rice Bridge);
- R682 Bawnfume – Tramore (radial route);
- R683 Passage East – Waterford (radial route);
- R684 Blenheim Cross – Dunmore East (radial route);
- R686 Morissons Road – Waterford (radial route);
- R708 Waterford – Waterford Airport (radial route);
- R709 Inner Ring Road (orbital road);
- R710 Outer Ring Road (orbital road);
- R711 Slieverue – Waterford (radial route); and
- R860 St. John's Street (radial route).

5.1.3 Orbital Road Network

There is the R710 Southern Orbital Route which connects the N25 to the R683 Passage East Road. However, there is a lack of an orbital local distributor road within the north of the city inside the N25. Figure 5-2 shows the national and regional road networks.

5.1.3 Local Road Network

This network of roads has a local distribution function. They are typically characterised by side road accesses and frontage development at frequent intervals. The local road network links to routes with a more strategic function.
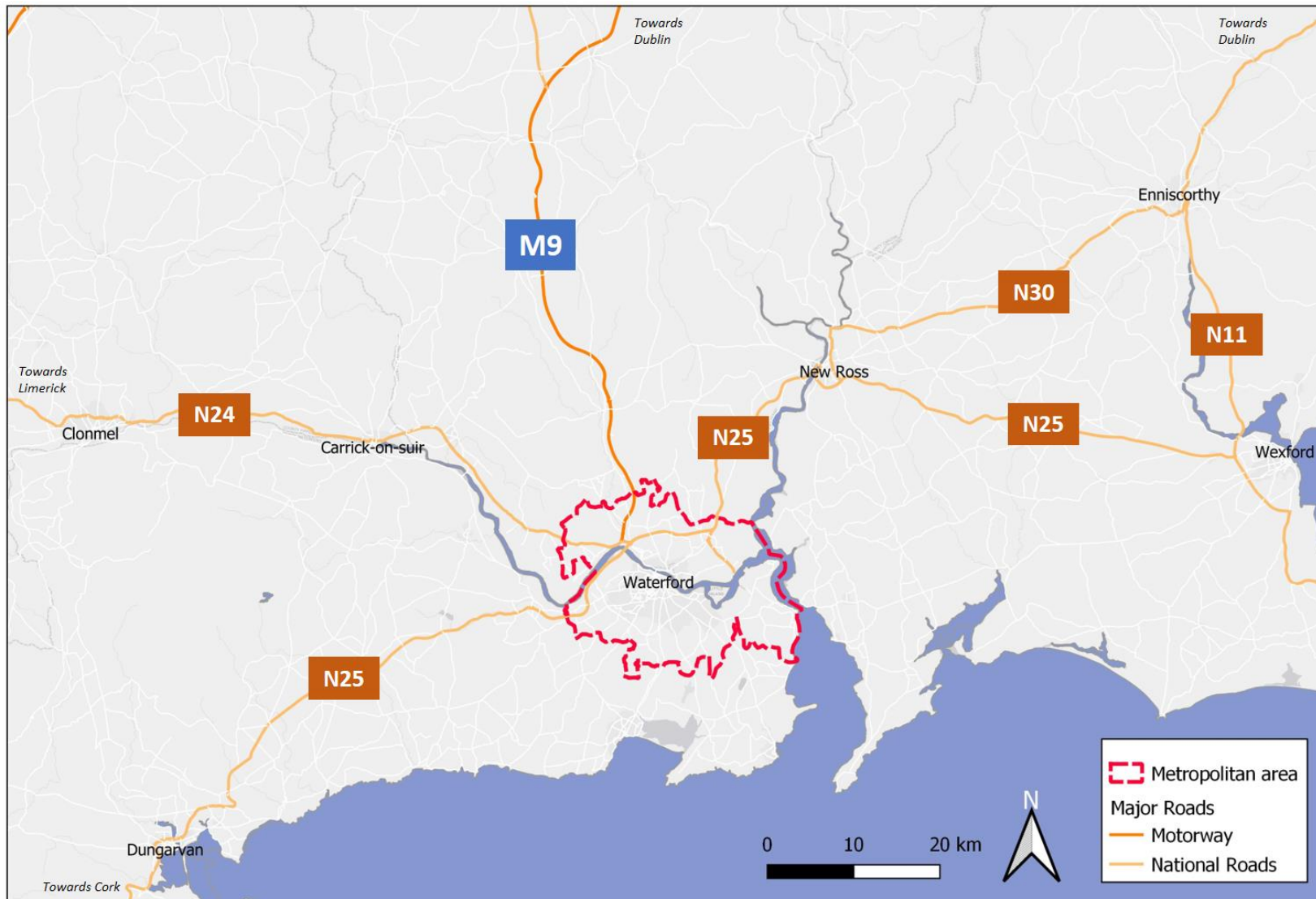
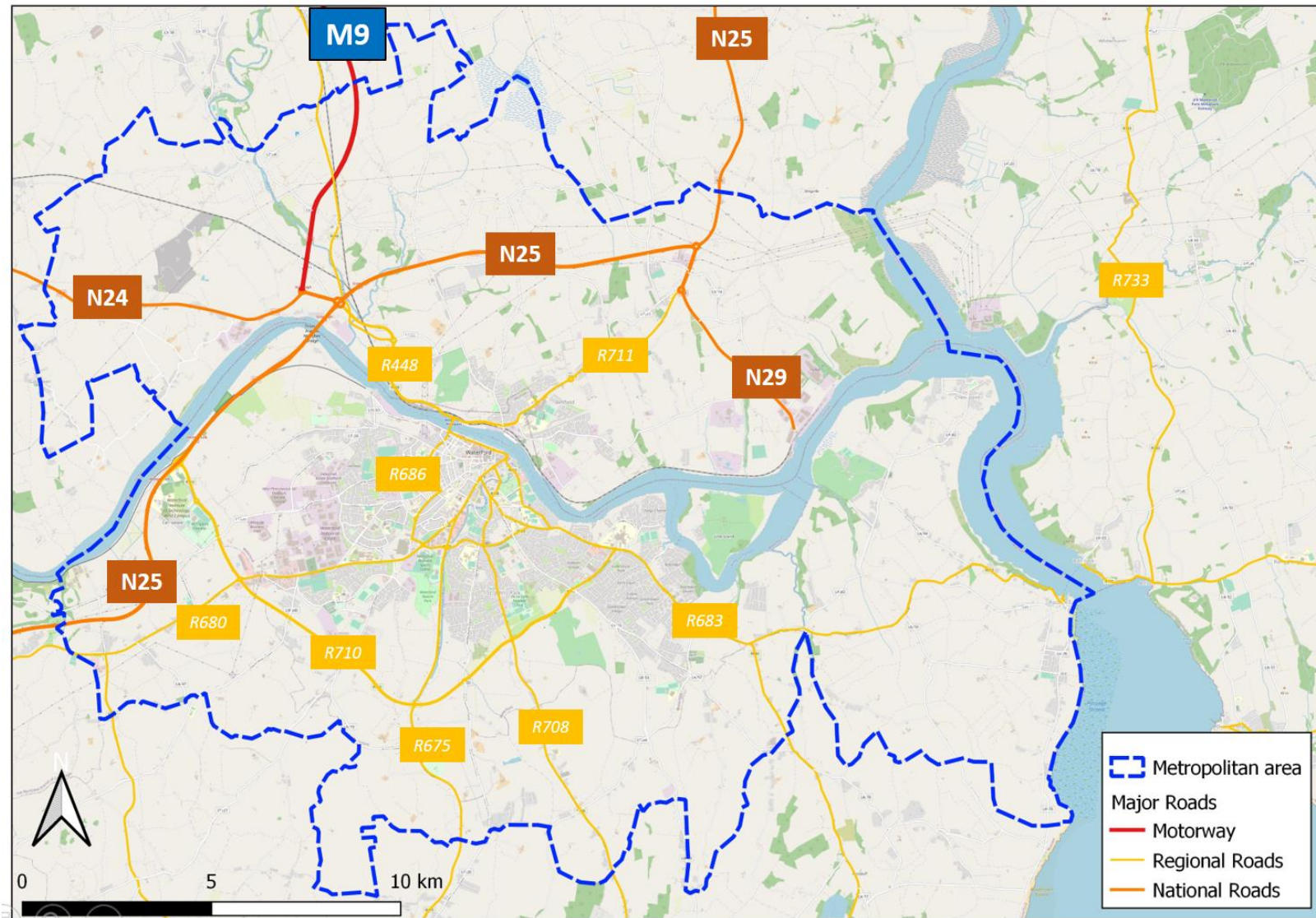**Figure 5-1 Waterford Metropolitan Area National Road Network Map**

Figure 5-2 Waterford Metropolitan Area National and Regional Road Network Map

5.2   Rail Network

5.2.1   InterCity Rail Network

There are several InterCity services providing direct rail connections from Waterford Plunkett train station, including:

■   Dublin Heuston to Waterford; and

■   Waterford to Limerick Junction.

The Dublin Heuston to Waterford service provides a connection from Waterford to Thomastown, Kilkenny, Bagenalstown, Carlow, Athy, Kildare, Newbridge and Dublin. Waterford has 7 connections to Dublin Monday to Saturday, with an additional service Friday and Saturday, and 4 services to Dublin on Sunday. Although there are connections to Waterford from Carlow, Bagenalstown, Kilkenny and Thomastown, the first train arrives in to Waterford at 09:39 Monday to Saturday. This would make the service unviable as a commuting option for work and education.

The Waterford to Limerick Junction service provides a connection from Waterford to Carrick-on-Suir, Clonmel, Cahir, Tipperary and Limerick Junction. The service also connects towards Limerick Colbert, Cork Kent and Tralee. Waterford has 2 connections to Limerick Junction Monday to Saturday. Like the Dublin Heuston to Waterford service, the first train arrives in Waterford at 11:26 Monday to Saturday, making it unviable as a commuting option for normal work and education patterns.

The timetables for Dublin Heuston to Waterford and Waterford to Limerick Junction listed above have been in operation since 31/08/2020.

5.2.2   Waterford to Rosslare line

There is a rail line present between Waterford and Rosslare. Prior to its closure in 2010, there was a limited passenger rail service. The line is required to be maintained by Iarnród Éireann.

5.2.3   Freight

Freight accounts for less than one percent of rail movements in Ireland at present.

The Waterford MASP supports the improvement of rail connectivity to the Port of Waterford and Rosslare Europort. Re-establishing rail freight movements across the wider WMA (and Southern Region in general) in the medium to long term is likely to depend on a variety of factors. These include but are not limited to, the following:

■   the necessity to reduce transport-related emissions;

■   the feasibility of electrifying railway lines;

■   a decision to strengthen the freight and logistics capacity of the Ports; and

■   other issues, including continued shortages in the ability to recruit HGV drivers.

It is noted that the RSES includes an objective to prepare a Regional Freight Strategy (RPO 141) where issues around rail freight connectivity are most likely to be further explored.

5.3   Bus Networks

5.3.1   City Bus Networks

The principal bus service providers in the Waterford Metropolitan Area are Bus Éireann and JJ Kavanagh. Most of the services terminate in the City Centre, whilst two are cross-city radial routes. In December 2018, the NTA enhanced City services providing upgrades to the fleet, service frequency and bus stop infrastructure, and a simplified fare structure.

Collectively, there are three higher-frequency (generally every 15 to 20 minutes) and seven lower-frequency (generally every 30 to 60 minutes) city bus routes. **Error! Reference source not found.** presents the map of the higher-frequency bus services and Figure 5-3 shows bus routes of lower frequency. From the first group, route W1, W2 and W3 are radial routes terminating in Waterford City Centre. The second group is a combination of cross-city and radial routes.

Waterford City Centre has an extensive one-way traffic system, which has a negative impact on public transport operations as bus routes are separated on inward and outward legs. This can be confusing for less frequent bus passengers and visitors to the City, who may not be familiar with the city bus network. Certain bus routes are also separated as a result of restricted road widths.

Table 5.1 classifies each of the city services into either high or low frequency service for all available operators. A high frequency service is classified as four or more buses an hour; anything lower than this has been classified as a low frequency service.

Table 5.1 Frequency of city bus services

| Service	Route	Operator	Frequency
360	Bus Station to Tramore	Bus Éireann	Low
360a	Bus Station to Tramore	Bus Éireann	Low
607	Ballygunner to Abbey Park	JJ Kavanagh	Low
617	Ballygunner to Slieverue Cross	JJ Kavanagh	Low
627	Ballygunner to The Clock Tower	JJ Kavanagh	Low
W1	Merchants Quay to The Clock Tower via WIT	Bus Éireann	High
W2	Meagher's Quay to The Clock Tower via WIT	Bus Éireann	High
W3	Meagher's Quay to The Clock Tower via St Johns Park	Bus Éireann	High
W4	Peter Street to Browns Road	Bus Éireann	Low
W5	Oakwood – Waterford Hospital	Bus Éireann	Low
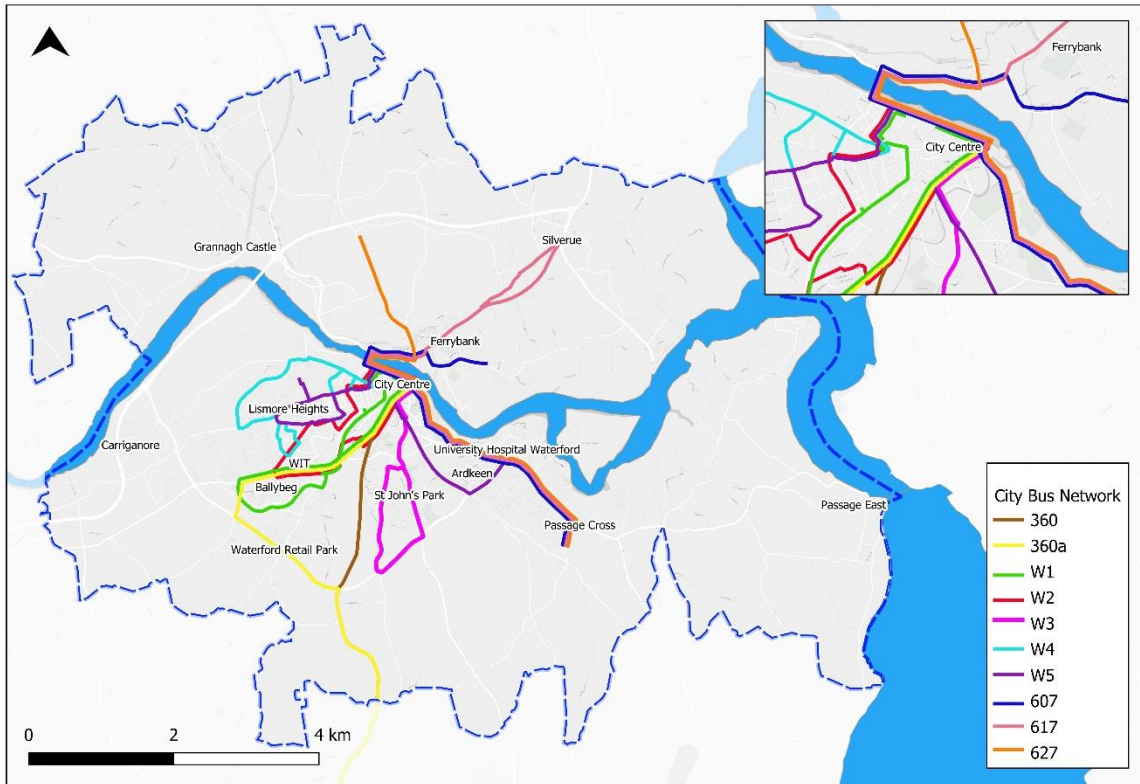
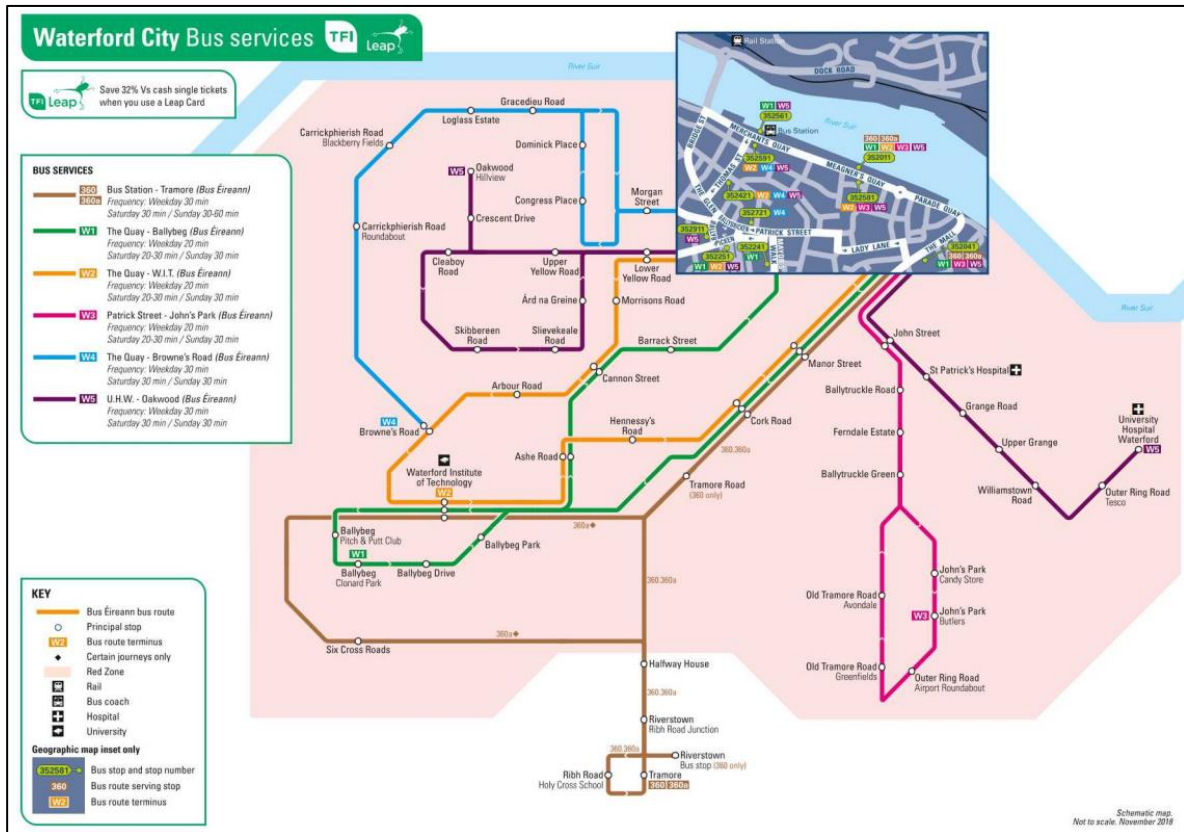Figure 5-3 City Bus Network in Waterford Metropolitan Area

Figure 5-4: Existing Bus Éireann City Bus Network in Waterford Metropolitan Area

5.3.2 WMA and Regional Bus Services

In addition to the city services, there are several regional Bus Éireann services providing links from different settlements within the wider County Waterford to the WMA as well as from counties Carlow, Cork, Dublin, Kilkenny, Longford, Tipperary, Westmeath and Wexford. These services are shown below in Figure 5-.
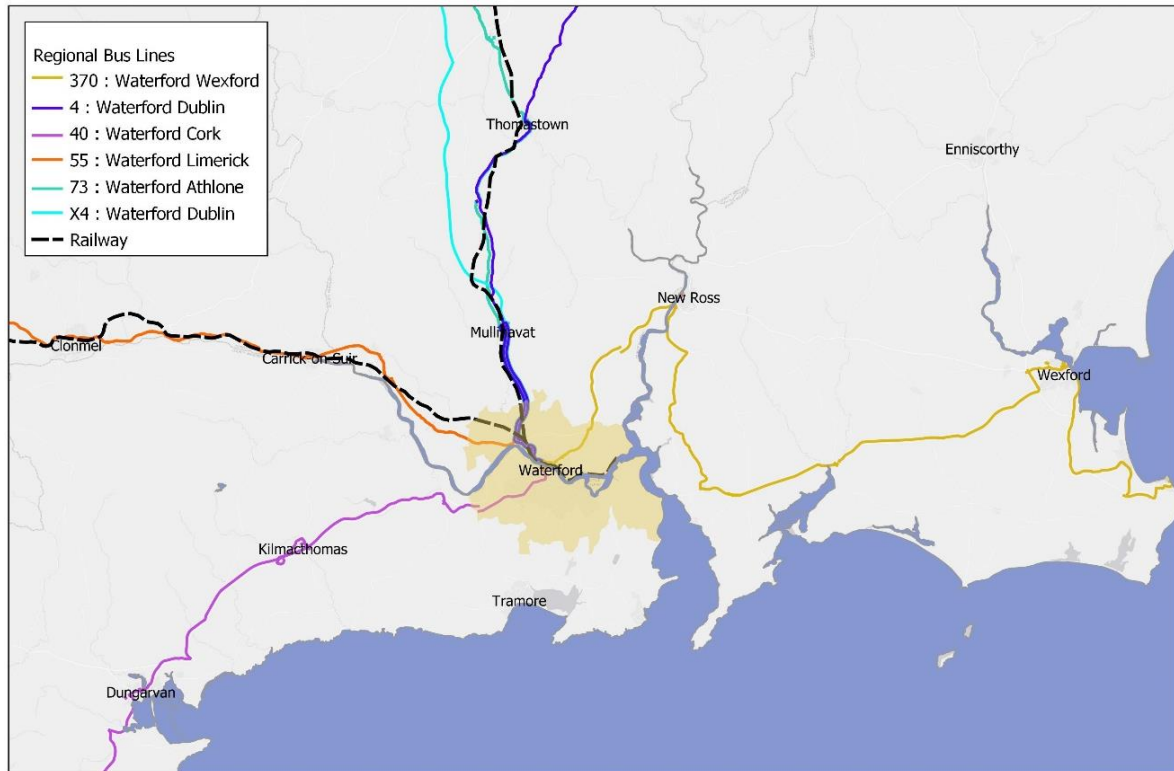

Figure 5-5 Existing Regional Bus Network in Waterford Metropolitan Area

A further 7 regional bus services are provided by the private operators including:

■ Dublin Coach (600);

■ Expressway (4, 40, 55);

■ Kenneally's / JJ Kavanagh (736);

■ Suirway Travel (608, 609, 610, 611); and

■ Wexford Bus (340).

Expressway provides a service every 2 hours from Waterford – Dublin City which provides an important link for visitors and students.

Suirway provide commuter services to Waterford City from Portlaw, Kilmeaden, Passage East and Dunmore East. Wexford Bus provides connectivity between Wexford Town, New Ross and destinations in Waterford City including the Regional Hospital and WIT.

There are 3 local bus services provided by Local Link Waterford City including:

■ 367A Dungarvan – Waterford City;

■ Dunmore East – Waterford City; and

■ Cheekpoint – Waterford City.

5.3.3   Bus Priority Infrastructure

The existing network of dedicated bus lanes/ priority within the Study Area is currently very limited. Where bus lanes are provided, they are often not continuous and end abruptly. Specifically, bus lanes are partially present on the following roads:

■   Newtown Road (R683);

■   Dunmore Road (R683); and

■   Merchants Quay.

5.4   Public Transport Interchange

The primary terminal for public transport services in Waterford City is at Waterford Bus Station, located just off Merchants Quay. This station facilitates interchange for coach and bus and is located within reasonable walking distance to Waterford City Centre.

The Bus Station serves as a hub for Expressway and Regional services operated by Bus Éireann and services operated by JJ Kavanagh, Suirway and Wexford Bus.

Interchange options and connectivity with Plunkett Rail Station are less developed, however, requiring an approximate 600m walk across the Rice Bridge to the North Quays.

5.5   Cycle Network

Figure 5-6 presents the existing cycle network within the Study Area. Despite the notable success of the Waterford Greenway to the west of the Study Area, the quality of the overall network is variable, and routes often lack continuity and directness. There are challenges associated with the severance effect created by the River Suir and the associated lack of dedicated cyclist-friendly river crossings. Other challenges relate to a general lack of safe cycling conditions such as fast-flowing vehicular traffic, several one-way and circuitous routes and poor junction design with little or no provision for cyclists (large corner radii, multi lane roundabouts with high traffic volumes and speeds).

There is no public Bicycle Sharing Scheme (BSS) provided in Waterford City at present. It is understood that Waterford City and County Council are currently working with the National Transport Authority to introduce a bike scheme, with approximately 15 docking stations and circa 150 bikes. These docking stations would be located towards Waterford City Centre, Waterford University Hospital, Waterford Institute of Technology and numerous Industrial Estates.

The Ferrybank Belview LAP 2017 identified several walking and cycling routes linking the Ferrybank area, Waterford City, employment centres and schools, nature corridors and residential areas. A Cycle Network Plan for Waterford and Environs was prepared in 2014 and there are aspirations to better connect the City and northern part of the City with the Deise Greenway and Tramore.
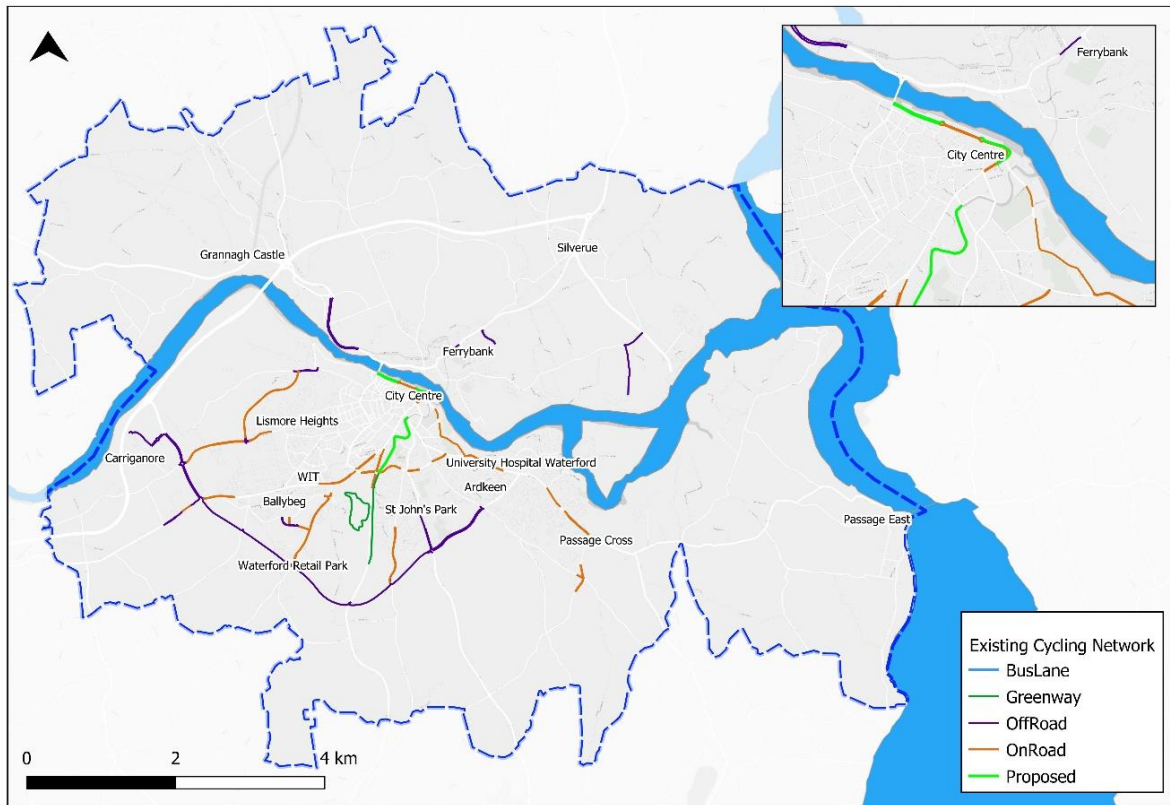
5.6 Walking Environment

The quality of the pedestrian environment of the City Centre has significantly improved in recent times following the implementation of a public realm strategy and the pedestrianisation of some streets as part of the Waterford City Centre Urban Renewal Scheme. Upgrades to the City's pedestrian space undertaken as part of the Viking Triangle implementation are of very high quality.

Outside of the immediate city centre, the quality of the pedestrian environment varies significantly and is often sub-standard. Pedestrian connectivity with the North Quays is poor at present and walking routes along main corridors to the city are poorly defined. The quality of the pedestrian environment and footpath width around inner city neighbourhoods and across local junctions is often poor.

5.7 Parking Supply

There are no dedicated, permanent Park and Ride facilities within the Study Area at present.

There are extensive private and publicly operated car parking facilities available in Waterford. Several of these car-parking facilities are located in areas where higher value uses such as housing and employment would normally be prioritised to achieve compact growth objectives.

The structure of the city centre parking charges is such that it encourages and facilitates long-stay car parking with many garages providing inexpensive daily and weekly rates, and therefore incentivising commuter traffic into the City Centre. This undermines the viability of the city bus services and the potential for walking and cycling.

Figure 5- shows the location of the main car parks and their total capacity in Waterford City. Major parking locations are within the city centre and include Merchants Quay Car Park and IPairc Clock Tower Car Park with 180 and 289 parking spaces, respectively. The largest car park is City Square with 490 spaces.
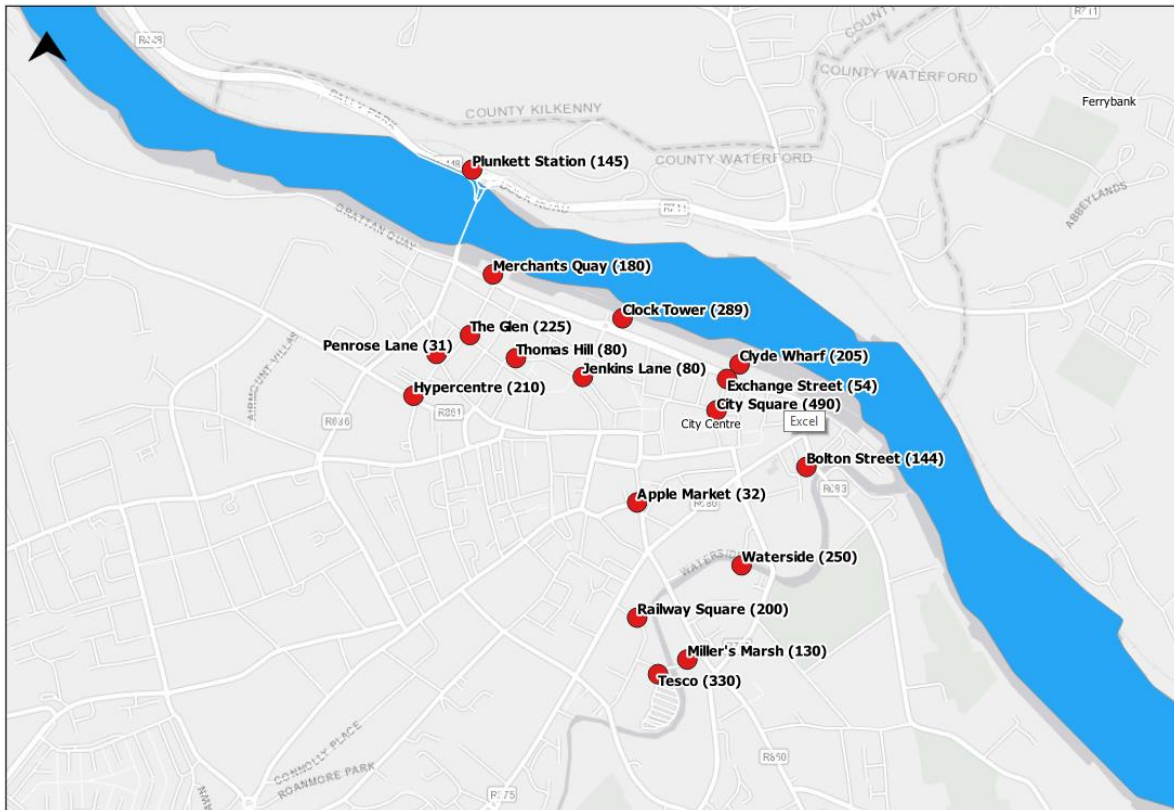

Figure 5-7 Waterford City Car Park Locations & Total Spaces

5.8 Waterford City and Suburbs- Summary of Existing Transport Infrastructure

There have been several recent improvements to the existing transport infrastructure within the WMA in recent years including:

■ Significant improvements to bus routes and service offering in Waterford;

■ Creation of the Waterford Viking Triangle and several high-quality public realm interventions within Waterford City Centre;

■ Improvements to the cycle network from Waterford Institute of Technology to Waterford City via the R680; and

■ Realisation of the Deise Greenway.

Despite these improvements, there are still some long-standing issues with localised congestion and sustainable transport connectivity within Waterford City. The quality of the strategic cycle and pedestrian network is inconsistent and interchange between the City's bus and rail network is poor. The Strategy will need to address issues related to severance and seek upgrades to the sustainable transport network to enable the City and Suburbs tro achieve the compact growth and concentric city objectives highlighted at national and regional level.

6 Existing Transport Networks – Metropolitan Area (outside of City / Environs area)

The Waterford Metropolitan Area also includes the settlements of Cheekpoint and Passage East in Co. Waterford and Slieverue in Co. Kilkenny. The following chapter provides an overview of the existing transport network characteristics in these areas.

6.1 Settlements and Road Network

The settlements referenced above are connected to the Study Area via a series of regional and local road networks:

■ Cheekpoint is a harbourside village located at the confluence of the River Suir and River Barrow. The village is accessed from Cheekpoint Road connecting both Cheekpoint and Faithlegg by a link from Regional route R683 with Waterford City.

■ Passage East is a village on the western side of Waterford Harbour and is connected to Waterford City by the R683. There is ferry service that provides connectivity to County Wexford at Ballyhack.

■ Slieverue is a rural settlement located around the Airmount Road and Bullring local roads. The village is bounded to the north by the N25, the south by the R711 to Waterford City and is connected to Bellview Port by the N29.

6.2 Regional Bus Network

The above settlements are served by the following regional bus services:

■ Cheekpoint is served by a Local Link Waterford service which operates 1 return service on Friday only;

■ Passage East is served by Route 608 which operates 1 return service Monday to Friday and 2 return services on Saturday; and

■ Slieverue is served by Route 617 which operates 13 return services Monday to Friday and 15 return services on Saturday.

6.2.1 Tramore to Waterford Bus services

Though located outside of the Study Area, Tramore is a significant commuter town for the WMA and is served by relatively frequent bus services. Tramore to Waterford is served by Routes 360, 360a and 736.

■ Route 360 is operated by Bus Éireann and runs from Monday to Sunday. Route 360 operates from 07:45 – 23:35 every 30 minutes Monday to Friday, and from 07:30- 23:00 every 30 minutes Saturday and Sunday.

■ Route 360a is also operated by Bus Éireann, runs from Tramore to Waterford at 07:15 and 08:15 and returns from Waterford at 15:30, 16:30 and 17:30 Monday to Friday.

■ Route 736 is operated by Kenneally's Bus and runs 4 return services a day from Tramore to Dublin Airport. Waterford WIT and other destinations within Waterford City Centre are served

on this route. The bus leaves Tramore at 07:55, 10:10. 13:15, 17:10. A return service from Waterford WIT arrives into Tramore at 10:20, 16:10, 18:55, 21:05.

6.3   Cycle Network

At present, all the above referenced settlements are characterised by a lack of dedicated cycling infrastructure. Cyclists share the local and regional road network with other vehicles.

6.4   Walking Environment

The walking environment in these settlements is heavily influenced by the way development occurred over time, generally characterised by ribbon development. Completeness and continuity of, for example, footpaths tend to be proportional to the level of development consolidation. Where provided, footpaths tend to be located on one side of the street with little priority evident over local junctions and access points.

Across most of the settlements, pedestrian infrastructure is generally limited and would require reallocation of existing road space to support more continuous footpaths and better crossing facilities. It is a common aspect within these settlements to have areas where footways are interrupted by grass verges, cul-de-sacs and walls, limiting permeability and the potential to favour walking as the preferred mode of transport over short distances.

6.5   Parking Supply

- Cheekpoint: limited dedicated on-street parking within the village; parking arrangements are mostly informal around the village post office and harbour area.

- Passage East: on-street parking outside shops in the village. Some off-street parking at Passage East Playground and at the harbour.

- Slieverue: on-street parking within the village and within the vicinity of schools. Some off-street parking for commercial premises.

7 Key Objectives and Challenges

7.1 Overview

This chapter summarises the key objectives and challenges that are relevant to the development of the Waterford Metropolitan Area Transport Strategy (WMATS). A Strength, Weaknesses, Opportunities and Threats (SWOT) analysis is available at the end of this chapter providing a synopsis of the key issues discussed throughout this paper.

7.2 Role of WMATS in Hierarchy of Plans

The Strategy will need to support the ambitious vision for the growth and regeneration for the Waterford Metropolitan Area to become a city of scale articulated both at national level – through the National Planning Framework and National Development Plan - and at Regional level through the Southern Regional Assembly's Regional Economic and Spatial Strategy (RSES) that the Waterford Metropolitan Area Strategic Plan (MASP) forms part of.

The vision and objectives outlined in the Waterford MASP in particular, will heavily influence the development of the WMATS. The relevancy of these policy frameworks was discussed in more detail in Chapter 2, but the more relevant points are reprised below.

7.2.1 National Planning Framework (NPF) 2040

Key NPF goals and objectives for Waterford that will inform the development of WMATS include:

- The WMA is projected to grow with at least an additional 35,000 people by 2040 to support a minimum population of 85,000 (at least 50% increase in population from 2016 figures) to enable it to become a city of scale and principal urban centre of the wider South-East region.

- Deliver at least 50% of all new homes within Waterford's existing built up area;

- Progressing the sustainable development of new greenfield areas for housing and the development of supporting public transport and infrastructure.

- Public realm and urban amenity projects focussed on streets and public spaces, particularly in the city centre and inner urban areas in support of urban intensification

- Delivering the North Quay SDZ regeneration project for integrated, sustainable development together with supporting infrastructure, including a new pedestrian bridge or a pedestrian / public transport bridge over the River Suir;

- Provision of a Citywide public transport and strategic cycle network;

- Extension of the Deise Greenway to link the Waterford Institute of Technology (WIT) and the City Centre;

- Enhanced regional connectivity through improved average journey times by road to Cork, Limerick and ports within the region.

7.2.2 The National Development Plan (NDP) 2018-2027 (Government of Ireland, 2018)

Some of the key investment actions that are mentioned in the NDP include:

- BusConnects for Ireland's Cities; and

- Progression of the Waterford North Quays SDZ regeneration project.

7.2.3   RSES and Waterford MASP (WMASP)

The RSES and Waterford MASP contain several detailed land use policies and growth ambitions for the WMA that are relevant to the development of WMATS.

The overall vision for the Waterford MASP is to develop a concentric city both north and south of the River Suir (including areas within County Kilkenny). These are numerous and varied and relate to the strengthening of the education (Technological University for the South East) and health sectors (including further development of the University Hospital). The identification of infill and regeneration opportunities would have a positive impact in terms of reducing the need to travel and ensuring more compact growth.

The WMATS will need to take these land use planning considerations into consideration as well as the stated key transport priorities from the WMASP that include:

- Development of the 10-minute city concept for Waterford;

- Relocation of the Railway Station to the North Quays Innovation District with more direct access to the city centre;

- Improved international connectivity through the port and airport;

- Implementation of an integrated, multi-modal public transport network across the Metropolitan Area servicing strategic residential and employment growth locations.

- Development and promotion of existing intercity rail and commuter links from Waterford to Dublin and Limerick, together with Kilkenny, Carlow, Newbridge, Clonmel, and Limerick Junction; and

- Retention of the Waterford to Rosslare rail line for future freight and passenger rail connectivity for Rosslare Europort.

7.3   NTA Vision, Mission and relevant Priorities and Objectives

The NTA is the responsible body for the development of transport strategies for each of Ireland's cities. Its responsibilities relating to the development of WMATS were outlined in Chapter 1 of this report.

The following provides a brief summary of the vision, mission, prioritise and objectives as set out in the NTA Statement of Strategy 2018-2022 that are of relevance to the Waterford Metropolitan Area Transport Strategy 2020-2040.

7.3.1   The NTA Vision

The NTA vision is as follows;

"To provide high quality, accessible, sustainable transport connecting people across Ireland."

7.3.2   NTA Mission

The following outlines the NTA's Vision, Mission and relevant Priorities and Objectives as set out by the NTA Statement of Strategy 2018-2022. These will inform the guiding principles, which in turn will inform the preparation of the WMATS, in conjunction with the national, regional and local policies set out in section 2 of this report.

The NTA's mission is to:

"increase the share of travel by sustainable transport across the country by

- *Securing the provision of an efficient, accessible and integrated transport system in rural and urban Ireland;*
- *Transforming and elevating customers' transport experience;*
- *Regulating privately operated transport services for the benefit of consumers;*
- *Contributing to the effective integration of transport and land-use policies; and*
- *Advancing Ireland's transition to a low emissions transport system.*

in a manner that supports Government policies and priorities and contributes to economic development, environmental sustainability and social cohesion in the State."

7.3.3 NTA Relevant Priorities and Objectives

The following outlines Priorities and associated Objectives set out in the NTA Statement of Strategy 2018-2022 that are of relevance to the Waterford Metropolitan Area Transport Strategy 2020-2040.

- **Priority 1:** Undertake strategic transport planning seeking the optimal alignment of land use and transport policy and practice, enabling an increased proportion of travel by sustainable transport modes.
  - □ Key Objectives:
    - Enable enhanced integration between transport provision and land use planning that reduces transport demand and promotes and facilitates travel by sustainable transport modes; 3. Provide a robust planning framework to guide transport investment decisions and project delivery; and
    - Assist in the achievement of Ireland's emission reduction targets.
- **Priority 2:** Promote the use of more sustainable modes of transport.
  - □ Key Objectives:
    - Promote a shift from car to more sustainable modes of transport thereby reducing carbon emissions;
    - Promote the convenience and attractiveness of public transport; and
    - Enhance the national identity for public transport, Transport for Ireland, across the public transport and travel options.
- **Priority 5:** Secure optimal provision of high-quality subsidised public transport services in the State.
  - □ Key Objectives:
    - Identify the appropriate network of public passenger transport services; and
    - Procure high quality and accessible bus, heavy rail and light rail services, at best value for money.
- **Priority 6:** Develop and secure the infrastructure to ensure a seamless customer experience across all travel modes.
  - □ Key Objectives:
    - Improve the customer experience of public transport by removing barriers to interchange between public transport services;
    - Provide information for all public transport services on new and existing information channels; and
    - Provide ticketing systems that allow for easy interchange between services.

This Strategy will, in collaboration with the key stakeholders TII, SRA and both Local Authorities seeks to outline the key infrastructural requirements to facilitate the development of Waterford to 2040 and beyond. In line with the NTA vision, sustainable transport will underpin the development of this Strategy.

7.4 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

The following tables provide a summary of some of the key Strengths, Weaknesses, Opportunities and Threats (SWOT) relating to the Waterford Metropolitan Area as set out in the preceding sections. These themes will be revisited over the course of the Strategy's development.

Strengths

- Principal urban centre in the South East.
- Ambitious NPF 2040 growth forecast of 50%+ by 2040 to become a city of scale;
- Well-located regional centre in relation to strategic transport network connectivity, including good connectivity to Dublin; and proximity to international seaports and regional airport;
- Bypass of City available via the N25 Suir Bridge;
- Diversion of some goods vehicle movements from City Centre has improved the traffic and pedestrian conditions
- Substantial recent improvements to local public transport services for example; much greater connectivity between WIT and Waterford City Centre by public transport (served by routes 355, 360a, 362, 367a, 370, 736 and W2);
- Generally, favourable topography for walking & cycling;
- Award winning Deise Greenway;
- Highly attractive, award-winning streetscape as part of recent development of the Viking Triangle and the wider retail core area;
- Committed NDP 2018-2027 investment i.e. Waterford North Quays SDZ);

Weaknesses

- Heavy reliance on use of the private car for short journeys.
- Legacy of city centre population decline undermining compact city objectives;
- Severance effect of natural barriers (River Suir), physical infrastructure (regional/distributor road network) and a deficiency in the level of provision for pedestrians/public transport users and cyclists, including crossing facilities
- Poor connectivity and service integration between rail (Plunkett Station) and bus (Waterford Bus Station) services.
- High level of car parking availability in the city centre encourages travel by car and acts as a disincentive to the use of sustainable transport alternatives.
- Very limited bus priority across the WMA.
- Limited public transport offer in peripheral areas of the WMA such as Cheekpoint and Passage East
- Poor quality pedestrian and cycling environment in parts of the city centre and suburbs including narrow pavement widths, heavily trafficked streets and one-way streets;
- Congestion within and on the approaches to City Centre, particularly during peak periods;
- An InterCity rail service with arrival times into Waterford that are not conducive for typical work commuting times or students.

Opportunities

- Opportunity to consolidate growth within the existing urban footprint and in particular within inner urban areas and designated growth areas including North Quays SDZ to create compact settlement patterns & improve the viability of public transport;
- The relatively small size of the WMA in comparison to other metropolitan areas offers significant opportunity for modal shift to sustainable travel in line with the '15 Minute city' principle.
- Opportunity to enhance Waterford's small-city attractiveness and quality of life as envisaged by the NPF.
- Opportunity to enhance north-south connectivity to underpin the 'concentric city' concept
- Opportunity to enhance national and international connectivity through the development of Waterford Airport and Belview Port;
- Opportunity to front-load public transport services and supporting infrastructure provision (especially bus) and pedestrian & cycling connectivity.
- Opportunity to build upon The Deise greenway's success and enhance connectivity to the City centre and destinations across the wider South-East.
- Opportunity to build upon existing rail infrastructure assets for the movement of freight and passenger services.

Threats

- A continuation of low-density development in areas not supported by public transport leading to further unsustainable travel patterns and increased pressure on the strategic road network;
- A failure to provide residential and commercial development at the required densities to support public transport investment;
- Insufficient investment in public transport service provision and supporting infrastructure, leading to longer and less reliable journey times, reducing the attractiveness of the public transport alternative and increasing car-based congestion;
- Economic uncertainty and any impact this may have on current growth targets and the availability of capital investment for infrastructure.
- A failure to provide alternative river crossing dedicated to sustainable transport, placing further pressure on the Rice Bridge.
- Failure at local level to reallocate road space to sustainable transport measures and the introduction of appropriate transport demand management measures, to manage use of the private car within the WMA.

7.5 Key Transport Challenges to be addressed by WMATS

This Report outlined the overarching vision and objectives for the Waterford Metropolitan Area as articulated by the statutory and non-statutory policy frameworks at national and regional/metropolitan level.

In short, the vision is for a thriving metropolitan centre and strengthening of Waterford's role as the largest urban centre in in the South-East. The ambitious growth targets and enablers set by the National Planning Framework and RSES/Waterford MASP will require a much greater consolidation of future development within existing brownfield and designated greenfield sites. These will in turn, be supported by high quality public transport provision and significantly enhanced walking and cycling networks to help realise Waterford's Compact Growth and Concentric City ambitions.

The following broad-brush set of challenges to provide for a better, more efficient transport network have been identified at the outset. It is envisaged that proposals to address these challenges will be refined over the Strategy's development.

- A requirement to better integrate the functions of land use and transport planning / investment, including the phasing of development;
- A need to support the projected significant increase in population to 2040 in accessible locations along quality public transport corridors;
- A need to plan for additional public transport capacity, frequency and journey time reliability for key destinations in the WMA including the City centre, a new University and expanded University Hospital.
- A need to support greater levels of sustainable transport connectivity across the River Suir.
- A need to re-allocate carriageway space away from the private car to support more walking, cycling and public transport;
- A need to build-upon the success of recent public realm interventions in the Viking Triangle Area and City Centre in regeneration sites and inner-neighbourhoods and Metropolitan Centres.
- A need to define and improve strategic walking and cycling routes across the WMA.
- A need to investigate the need for Park and Ride for the benefit of people accessing the city from the surrounding areas and to reduce the need for long-stay parking and private car travel within the city centre;
- The need to maintain an effective strategic road network in the Waterford Metropolitan Area that is integrated with the wider national road network to cater for strategic trips and the movement of goods;
- The need to optimise existing transport infrastructure including rail;
- The need to identify cost efficient solutions in addressing existing challenges and to enable the achievement of the Strategy's objectives;
- A need to improve the health and safety impacts of transport in the WMA, prioritising active travel and reducing traffic collisions and improving air quality;
- The need to consider the impact of transport on the environment through targeted measures to limit the negative impact of transport emissions.