LIMERICK DEVELOPMENT PLAN 2022-2028

Background Paper
Connectivity & Infrastructure

ATLANTIC EDGE
LIMERICK
EUROPEAN EMBRACE

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1.0 – Introduction

This document sets out the existing situation in Limerick City and County in relation to digital connectivity, transport and infrastructure, including water, wastewater, waste disposal, gas and electricity. These aspects of critical infrastructure are essential components for a modern, well- performing city, county and region, and are crucial to deliver the long-term vision of the Council for Limerick. This baseline information is necessary to inform objectives and policies of the proposed Limerick Development Plan 2022 – 2028. There is a pressing need to up-date local planning policy, aligning it with the national Government planning vision for the spatial and economic development for the State and Limerick as established by the National Planning Framework (NPF). Limerick is also required to align with regional level planning policy – the Regional Spatial and Economic Strategy for the Southern Region (RSES), of which Limerick forms part.

Limerick City and County Council must ensure its planning policy in relation to these infrastructures create the conditions and opportunities enabling Limerick to progress in terms of population growth, economic development, environmental quality, social and cultural services and experiences for its citizens and future generations.

Digital/communication, transport networks and availability of adequate infrastructure are critical determinants of the success of the future economic and population growth of settlements throughout Limerick. Accessible, feasible and affordable connectivity networks can provide better employment and educational opportunities for all and can assist in reducing socio-economic inequalities. The timely delivery of high quality, dependable, agile connected systems can attract inward investment in terms of job creation, social capital initiatives reducing social isolation, and issues of marginalisation and inequality across Limerick City and County. There are also environmental benefits to the development of these systems in the interest of a collective movement as Ireland transitions to a low carbon economy and society.

Limerick City and County Council no longer has direct control in relation to the provision of water and wastewater services, responsibility lies with Irish Water, since its establishment in 2014, who are tasked with the delivery, integration, and implementation of water and wastewater projects and infrastructural improvements. Limerick City and County Council continue to work closely with Irish Water to ensure that there is adequate water and wastewater facilities to enable growth. Limerick City and County Council will work closely with Irish Water to ensure that there are adequate water and wastewater facilities to ensure that the projected growth in housing and economic development is facilitated.

The integration of land-use planning with transportation and Infrastructure is essential for delivering sustainable development. Reducing the need to travel long distances by private car and increasing the use of sustainable and healthy alternatives can bring multiple benefits to the environment and our communities. The Local Authority recognises the challenges associated with the delivery of infrastructure, however the Development Plan must identify the necessary policy framework to encourage and facilitate the development of sustainable means of travel and the necessary infrastructure needed to developed Limerick as a sustainable and vibrant place to live, work and visit.

2.0 – Digital Connectivity

2.1 – Introduction

Connectivity refers to the necessary systems of digital fibre connections for Wi-Fi, internet, and telecommunications, and transport movement for a modern well-functioning region, city and society. Key Digital Technologies include; Cybersecurity solutions, Social Media, Mobile services, Cloud technologies, Data analytics, Robotics and automated machinery, and Internet of Things (IoT). Many of these technologies are already having an impact on our businesses and workplaces, others continue to grow in significance while, for some, the full significance will not be seen for a number of years. Areas where digital technologies are expected to have a major impact on people's lives in the years to come includes Smart Cities, driverless cars, eHealth, e-commerce and Smart Homes. Though these may appear futuristic, considerable progress is being made already around the world in the use of digital technology in urban environments as part of 'Smart Cities' initiatives. Driverless cars have been tested and are expected to make our roads safer in the future. 'Smart homes' refers to the control of heating, lighting and household appliances remotely over the internet, something that is already a reality in many Irish homes.

2.2 – Legalisation and Policy Context

2.2.1 – European Planning Context

The importance of digital technology and its potential to change citizen's lives is acknowledged by the European Commission. A Europe fit for the digital age is one of the six European Commission Priorities for 2019 – 2024. The EU's Digital Strategy aims to make the digital transformation work for people and businesses, while helping to achieve the European Green Deal target of a climate-neutral Europe by 2050 which is another priority for 2019 - 2025. The Commission has proposed a set of measures to ensure everyone in the EU will have the best possible internet connection, so they can participate fully in the digital economy. These objectives will develop technology that works for people, creates a fair, competitive economy and ensures an open, democratic and sustainable society. The Digital Strategy will create a single market for data so it can flow freely within the EU and across sectors, while respecting stronger privacy and data protection rules. Delivering on its Digital Single Market Strategy, the Commission adopted in 2016, a set of initiatives and legislative proposals to place the EU at the forefront of internet connectivity. These include public Wi-Fi promoting free Wi-Fi for citizens in Europe's parks, squares, public buildings, libraries, health centres and museums and Broadband connectivity. In 2019 the European Commission approved, €2.6 billion of public support for the Irish National Broadband Plan (NBP). The funding will help address connectivity deficits across Ireland in an effort to achieve 100% high-speed coverage. This is an objective of the Commission's strategy, as is uninterrupted 5G coverage for all urban areas. The national broadband targets of Ireland are in line with the Digital Agenda for Europe, both for coverage and take up. The National Broadband Plan (NBP) is the Irish Government's plan to deliver high speed broadband services to all businesses, farms and households in Ireland.

Progress across Europe in digital policy is measured by the annual European Commission Digital Economy and Society Index (DESI) and Ireland ranked seventh out of the 28 EU Member States for 2019. Ireland has top ranking among EU countries when it comes to the

integration of digital technology. Ireland ranks 5th in fast broadband coverage with 96%, compared with an EU average of 83%; and 10th in fast broadband take-up, with 54%, compared with an EU average of 41%.[1]

2.2.2 – National Planning Context

The National Planning Framework (NPF) is the national planning policy document that guides at a high-level the strategic planning and development of the country over the next 20+ years in a sustainable manner. The National Development Plan is the funding mechanism to implement the Strategic Policy Objectives to secure the Strategic Policy Outcomes of the National Planning Framework. The NPF with the National Development Plan (NDP) establishes the context for each of Ireland's three regional assemblies to develop their Regional Spatial and Economic Strategies, taking account of and co-ordinating Local Authority County and City Development Plans in a manner that will ensure national, regional and local plans align. The NDP establishes the Government's strategic investment priorities until 2040 to implement the NPF. The NPF has identified Limerick for significant additional growth by 2040, this will include population and employment and will have a significant impact on the delivery of services and demands on existing and proposed infrastructure. The NPF identified the need for a Strong Economy, supported by Enterprise, Innovation and Skills, which will depend on creating places that can foster enterprise and innovation and attract investment and talent. It can be achieved by building regional economic drivers and by supporting opportunities to diversify and strengthen the rural economy, to leverage the potential of places. Delivering this outcome will require the coordination of growth and place making with investment in world class infrastructure, including digital connectivity, and in skills and talent to support economic competiveness and enterprise growth.

Furthermore, the NPF set out the following National Policy Objectives in relation to the digital connectivity.

National Policy Objective 21 - Enhance the competitiveness of rural areas by supporting innovation in rural economic development and enterprise through the diversification of the rural economy into new sectors and services, including ICT-based industries and those addressing climate change and sustainability.

National Policy Objective 24 Support and facilitate delivery of the National Broadband Plan as a means of developing further opportunities for enterprise, employment, education, innovation and skills development for those who live and work in rural areas.

2.2.3 – National Broadband Plan

The National Broadband Plan (NBP) is the Government's plan to deliver high speed broadband services to all businesses, farms and households in Ireland. It will ensure that people living and working in rural areas have the same digital opportunities as those in urban areas. The NBP is a key aspect of government strategy across a number of key areas including climate, agriculture, education, transport, tourism, sustainable growth, jobs and health.

[1] https://ec.europa.eu/ireland/news/key-eu-policy-areas/eu-digital-single-market

A key principle of the NBP is to support and stimulate commercial investment. Since the publication of the NBP in 2012, the commercial telecommunications sector has invested over €2.75 billion. This was spent primarily on upgrading and modernising networks which support the provision of high speed broadband and mobile telecommunications services. Significant additional investment is expected over the coming years.

2.2.4 – National Digital Strategy 2018 – 2027

The National Digital Strategy 2018 – 2027, is intended to assist Ireland to maximise the economic and societal benefits from digitalisation, and is currently still in draft form. The completed strategy will be subject to Cabinet approval prior to publication. The National Development Plan (NDP) sets out the level of investment which will underpin the National Planning Framework (NPF) and drive its implementation over the period 2018-2027. This is to be aligned with the National Strategic Outcomes contained in the NPF.

2.2.5 – Realising Our Rural Potential – Action Plan for Rural Development, 2017

Published by the Department of Culture, Heritage and the Gaeltacht identified as key deliverables protecting local services including rural transport, and ensuring all homes and businesses in rural Ireland have Broadband connection. Under Pillar 5 of the Programme Improving Rural Infrastructure and Connectivity objectives included improving the connectivity of rural areas through broadband connection and improved transport links. Key developments in Limerick, including the Limerick Clare Local Link bus service in County Limerick and nine Broadband Connection Points (BDPs) identified by the Council as key locations identified under the Broadband Programme for early connection in the roll out of the National Broadband Plan (NBP).

2.3 – Regional Planning Context

To implement national policy of the NPF at the regional level, the Southern Assembly adopted the Regional Spatial and Economic Strategy for the Southern Region, which includes Limerick, and provides regional policy objectives (RPOs) for the development of the Southern Region as informed by the National Strategic Outcomes (NSO) and the National Policy Objectives (NPOs) of the NPF.

Regional Policy Objective 133 – Smart Cities

It is an objective to:

- To develop Smart Cities as engines for a Smart Region (urban and rural);
- To support the initiatives of the All Ireland Smart Cities Forum;
- To seek good practices yielded through living labs, test-beds;
- To seek the deployment of disruptive technologies and smart infrastructures in cities, towns, villages and rural areas;
- To seek investment in the initiatives of stakeholders to achieve the pillars of the EU Digital Single Market.

Regional Policy Objective 134 – Smart Cities and Smart Region

It is an objective to:

- To build on Smart Cities and Smart Region initiatives in Cork, Limerick and Waterford, such as the All Ireland Smart Cities Forum, and seek to extend such initiatives to towns, villages and rural areas to support a Smart Region.
- To seek investment in broadband, fibre technologies, wireless networks (including an Internet of Things Network across the Region) and integrated digital infrastructures to enable actions that sustainably deliver on smart technologies to increase the innovative, sustainable and competitive placemaking dividend for the Southern Region.
- To support a leadership role for the Southern Region as an innovator in smart technologies and smart mobility. d. To seek and support investment for initiatives in smart technology as an enabler for education and life-long learning in all locations.

Regional Policy Objective 135 – High Quality High Capacity International Digital Transmission

It is an objective to:

- To optimise the economic opportunities for all locations in the Southern Region from achieving high quality high capacity international digital transmission connections between the Region, the US, the UK and Europe through support for improved regional digital and internet exchange facilities (subject to required feasibility, planning and environmental assessment processes) in each of the region's cities and metropolitan areas and optimise the infrastructure asset of the projects such as projects such as the Hibernia Express subsea cable line located at Cork Internet Exchange and the Ireland-France subsea cable.
- To seek investment and continual strengthening of Metropolitan Area Networks.
- To support and seek investment in the sustainable delivery of digital infrastructure ducting and dark fibre infrastructure.

Regional Policy Objective 136 - National Broadband Plan (NBP)

It is an objective to seek to expedite the implementation of the National Broadband Plan and the implementation of mitigation measures outlined in the SEA and AA for the NBP to all locations in the Region and seek reporting procedures to the Southern Regional Assembly on progress and targets being achieved from the relevant State Departments and agencies through effective implementation mechanisms for the RSES.

Regional Policy Objective 137 – Mobile Infrastructure

It is an objective to strengthen the continued delivery of high-speed, high-capacity digital and mobile infrastructure investment in our region and strengthen cross regional integration of digital infrastructures and sharing of networks.

Regional Policy Objective 138 – Digital Strategies

It is an objective to promote the preparation and support the implementation of digital strategies by each local authority, seek investment for actions identified, and support the role and initiatives of the Mobile and Broadband Taskforce in addressing digital and mobile coverage blackspots and rural communications connectivity.

Furthermore, the RSES highlights Limerick's Digital Strategy as an example of good practice and outlines that Limerick's digital strategy will enable the development of a smart, sustainable, city and region, where digital technologies improve quality of life, empower communities and enable economic growth. Limerick is the first city in Ireland to appoint a Chief Digital Officer to lead the development of a digital strategy that will lay the foundation for the Smart Limerick Region. This initiative will invest in technology and research so that, by 2020, citizens and businesses will be better engaged in city life using digital channels, while locals and visitors will be able to access information on some 2,000 attractions, new online services provided by the Council and over 1,000 events each year in a single digital experience platform – www.limerick.ie.

2.4 – Local Planning Context

2.4.1 Limerick's Digital Strategy - Building Ireland's First Digital City – Smart Limerick

Limerick City & County Council published Building Ireland's First Digital City – Smart Limerick Roadmap 2017 – 2020 as the Councils' digital strategy document to ensure that Limerick, both the City and County can better respond to economic, social and environmental needs through the use of innovative smart technology. It was the first Local Authority in Ireland to publish a digital strategy. Limerick City is considered to be a smart city striving to improve sustainable outcomes as it responds to the challenges of climate change, changing demographics and opportunities such as population growth. The Strategy focuses on six Smart Limerick Domains. These domains represent areas where innovative solutions, ICT enabled and digital services will have a positive impact on Limerick's economic, social and physical environment benefiting all citizens across the Smart Limerick Region. There are 10 programmes in the Strategy, each containing a number of actions for improving opportunities through digital technologies. Movement & Transport is a domain of the Strategy with a number of actions including Smart Parking, Smart Parking for Disabled Drivers, and Transport Patterns for Rural Transport, and Open Data for Autonomous Vehicles. Many actions under the Smart Limerick Domains are inter-related to and complement transport. Under the Economy & Innovation domain the Council seeks to update its planning policies to ensure that new development in Limerick supports the vision of a digitally connected society. The Municipal Data Network will enable more real-time data to be collected using Internet of Things technologies with over 100 air, noise, water and soil quality sensors while footfall counters and Smart CCTV will enable safer communities and new datasets that will be used to foster innovation and support our start-up ecosystem in the Georgian Innovation District.

2.5 – Progressive Limerick

Limerick is generally performing well in terms of Broadband availability having 97,889 premises (93%) in the City with connections to Broadband. At a County level 58% of premises have access to this digital network. Nationally, Limerick has the fourth highest penetration rate of the Broadband in Ireland. The Council seeks to ensure that it's planning policies and objectives support the further expansion of Broadband. High quality digital connectivity sustains economic development, open distance education opportunities, cultural and social experiences, and many positive attributes of a Smart City, Smart home/ buildings, and future innovative Smart transport systems.

Limerick was awarded a substantial grant in the biggest EU Research and Innovation Funding programme, Horizon 2020, for a smart cities and community's project worth €6.5m to the city. The +CityxChange (positive city exchange) is a smart city project submitted by a consortium of 32 partners, including Limerick City and County Council from 11 countries. The full scale project will receive €20 million in funding from Horizon 2020 which has nearly €80 billion of funding available over 7 years.

For the next five years, Limerick City along with the city of Trondheim in Norway will work with five other follower cities, Alba Iulia (Romania), Pisek (Czech Republic), Sestao (Spain), Smolyan (Bulgaria) and Voru (Estonia), to develop together through citizen engagement a series of demonstration projects on how to become smart positive energy cities. Together, with all of their citizens, they will develop solutions that will help generate more energy than they consume, and exchange experiences with cities across Europe to learn faster, together.

By winning the grant, Limerick will become the first Irish 'Lighthouse Smart City' **-** Lighthouse cities are ones that develop and tests integrated innovative solutions at district scale and act as exemplars for their region and other cities and regions across Europe. Limerick is the only Irish city to ever receive this prestigious award and €6.5m of the overall funding will go directly to Limerick and its partners.

The focus in Limerick will be on the development of a new community grid and the use of smart meters, innovation in new energy sources (including hydrokinetic energy) and storage, digital tools and citizen participation to create what is called a Positive Energy District in Limerick city centre, starting with the Gardens International building and ENGINE training and workspace, provided by Innovate Limerick**.** A Positive Energy District is one that contributes more energy than it consumes.

The project includes, the development of a framework and supporting tools to enable a common energy market. This market will be supported by a 'connected community', using digital technologies for collaboration, to reduce energy costs and resource consumption and to engage more effectively and actively with its citizens.

2.6 – Conclusion

Provision of high quality, accessible and affordable digital connectivity to meet the demands of population growth, concentrated employment and education hubs, higher residential densities, in accordance with policies and objectives of the NPF, and the RSES for the Southern Region, and in rural Limerick as envisaged by the National Broadband Plan, is critical for the development of Limerick City and County. There is a need to maximise the potential of digital infrastructure, including environmental quality monitoring, supporting more active lifestyles and enabling digital to cultural and artistic experiences in the interest of citizen health and well- being.

Limerick City and County Council will seek funding and partnership opportunities to attract inward investment to support Limerick City and County's digital infrastructure to sustain and enhance economic and population growth.

3.0 – Transport

3.1 – Introduction

Limerick is the focal point for the Mid-West Region of Ireland, and must position itself accordingly in order to act as the key economic driver of the region going forward. In order to do so, and to foster sustainable growth, the City must overcome a number of key transportation challenges. These challenges are not unique to Limerick and the Mid-West Region; on a national basis, current traffic growth and travel patterns are assuming unsustainable characteristics. A fundamental shift towards sustainable travel is therefore necessary. This approach must have at its heart an emphasis on sustainability – achieving behavioural change with a focus on walking, cycling and public transport as real alternatives for travelling within larger urban centres, while there has been significant investment physically and in education by the Smarter Travel Programme, this really is the initial shift towards a more progressive, environmentally focus City and County.

Connectivity and permeability remain at the forefront, and Limerick must continue the build on the foundations laid by the Smarter Travel initiative and continues to develop the relevant infrastructure in consultation with the relevant stakeholder, such as the National Transport Authority, Transport Infrastructure Ireland and Transport Providers. Efforts to promote sustainable modes, complemented by a new approach to management of the transportation network will in turn act as catalysts towards delivering an inclusive, sustainable City and County, which is capable of accommodating significant population in a sustainable manner.

3.2 – European Legalisation

European Union (EU) transport policy aims to ensure the smooth, efficient, safe, and free movement of people and goods throughout the EU, by means of integrated networks using all modes of transport (road, rail, water and air). Transport is a cornerstone of European integration and is vital for fulfilling the free movement of individuals, services and goods. Transport is also a major contributor to the EU economy. The transport industry directly employs around 10 million people in the EU and accounts for about 5% of gross domestic product (GDP). The quality of transport services has a major impact on people's quality of life.

The European Commission adopted the Transport 2050 Roadmap to a Single Transport Area to introduce profound structural changes to transform the transport sector across the EU by building a competitive transport system that will increase mobility, remove major barriers in key areas and fuel growth and employment. The Roadmap contains 40 initiatives designed to generate growth, jobs, reduce dependence on imported oil, and cut the sector's carbon emissions by 60% by 2050. By 2050, key goals include:

- No more conventionally-fuelled cars in cities.
- 40% use of sustainable low carbon fuels in aviation; at least 40% cut in shipping emissions.
- A 50% shift of medium distance intercity passenger and freight journeys from road to rail and waterborne transport.
- All of which will contribute to a 60% cut in transport emissions by the middle of the century.

The following climate change policies are also related to transport and digital connectivity:

- European Climate Adaption Platform (Climate-ADAPT) and its research in relation to transport and its impact Europe's environment, providing reliable information to policy and decision makers.
- EU 2020 Climate and Energy Package setting binding legislation to ensure the European Union meets its ambitious climate and energy targets for 2020, known as the "20-20-20" targets. Transport has a role to play in reaching these targets.

The Trans-European Transportation Network (TEN-T) is the European Commission's policy for the development of a Europe-wide transport network of roads, rail, inland waterways, maritime shipping routes, and the associated infrastructure such as ports, airports and railway terminals. The objective is to achieve high quality multi-modal connectivity on Core Network Corridors throughout the EU. The comprehensive network will ensure accessibility and connectivity of all regions in the European Union. The TEN-T Corridor includes for the lining up Foynes on the TEN – T Network, with the development of the Foynes to Limerick Road Improvement Scheme and the redevelopment of the Shannon - Foynes rail connection.

3.3– National Planning Context

3.3.1 – National Planning Framework

The National Planning Framework (NPF) is the national planning policy document that guides at a high-level the strategic planning and development of the country over the next 20+ years in a sustainable manner. The purpose of the NPF is to set long-term national and regional development frameworks within which Government Departments and Agencies, the Regional Assemblies and local authorities, as well as wider private sector and community interests will work together to ensure proper planning and sustainable development and the optimal development of the country as a whole. The goals of the NPF are expressed as National Strategic Outcomes and a number are directly relevant to transport.

- Compact Growth NSO 1 – By progressing appropriate and effective densities and the consolidation of urban settlement rather than the sprawl of urban development of past policy is a top priority for the NPF as we learn from mistakes of the past. However, compact urban growth requires high quality intermodal connectivity and

more sustainable modes of travel (walking, cycling, public transport and for freight/movement of goods) and energy consumption (efficiency, renewables) within the urban context. People and businesses need real choices for movement which are accessible and affordable.

- Enhanced Regional Accessibility NSO 2 – The NPF establishes that all regions and urban centres should have a high degree to connectivity to Dublin, each other and along the Atlantic Economic Corridor, which includes Limerick City and County. The NPF specifically states not every route has to look east to Dublin, but that accessibility and connectivity between places such as Cork and Limerick are essential in the interest of balanced regional development. The M20 Cork to Limerick is a major infrastructural project allocated €0.9billion under the NDP to improve journey times between these cities.
- Strengthened Rural Economies and Communities NSO 3 - Improved connectivity, broadband and rural economic development opportunities are critical, according the NPF to sustain rural communities. Measures include the provision of a quality nationwide community-based transport system in rural Ireland which responds to local needs under the Rural Transport Network and similar initiatives, and promoting new economic opportunities.
- Sustainable Mobility NSO 4 –The transport sector must align with Ireland's Climate Mitigation Plan according the NPF. The transport sector in Ireland is the second highest contributor to national Greenhouse Gas (GHG emissions) at 19%. Private cars are the highest source of these emissions accounting for 51.5%, whilst heavy goods vehicles account for 18% and light goods vehicles account for 8.4%. Means to achieve National and European EGH emission targets include electrifying mobility systems from pollution carbon intensive engines to new technologies such as EV, electric and hybrid traction systems for public transport fleets and other disruptive transport technologies that may become available for private, freight, business and the public transport. The NPF seeks to expand attractive public transport to reduce congestion and emissions and enable the transport sector to cater for the demands associated with longer term population and employment growth in a sustainable manner and provide public transport infrastructure and services to meet the needs of smaller town, villages and rural areas.
- High Quality International Connectivity NSO 6 – Timely movement of the goods and people within Ireland, with its neighbouring countries and to the global market is crucial for international competitiveness, and addressing opportunities and challenges post-Brexit. Long-term sustainable development of Ireland's ports requires strategic port connections including enhancing road connectivity to Shannon-Foynes Port including local by-passes. Ireland is heavily dependent on freight transport for movement of goods across the county but also oversees to the UK, EU and other international trading partners.
- Transition to a Low-Carbon and Climate Resilient Society NSO 8 - Ireland has set itself the target to transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050. Government investment priorities for transport and connectivity will align with the National Mitigation Plan which sets this national climate adaptation target. New alternative energy systems, and distribution networks for new transport technologies will be necessary. For example, targets set out in the NPF include at least 500,000 electric vehicles on the road by 2030 with

additional charging infrastructure to support this transition. In terms of public transport, the national bus fleet will commence its transition for to low-carbon emission vehicles from 2019 with no diesel buses purchased for the national fleet from 2019. Comprehensive integrated public transport is to be made available to growing population living and moving within higher density urban centres and employment centres having a real choice of alternative transport to the private cat. Investment will be made in sustainable transport measures including connected walking and cycling networks in Cities and the expansion of greenways and as options for movement by people. National Policy Objective 64 seeks to improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes, heating systems with zero local emissions, green infrastructure planning and innovative design solutions.

Key growth enablers for Limerick identified by the NPF

The NPF identifies key growth enablers for Limerick from a Transport perspective as follows:

- Provision of a Citywide public transport network, with enhanced accessibility from the City Centre to the National Technological Park, UL and Shannon Airport;
- Development of a strategic cycleway network with a number of high capacity flagship routes;
- Enhanced road connectivity to Shannon Foynes Port, including local by-passes;
- Enhanced regional connectivity through improved average journey times by road to Cork and Waterford;
- Provision of Citywide public transport network from the City Centre to the National Technological Park, University of Limerick, and Shannon International Airport

In addition to the National Policy Outcomes and Key enablers, the NPF also sets out specific policies as follows:

National Policy Objective 27

Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages.

National Policy Objective 30

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

National Policy Objective 40

Ensure that the strategic development requirements of Tier 1 and Tier 2 Ports, ports of regional significance and smaller harbours are addressed as part of Regional Spatial and Economic Strategies, metropolitan area and city/county development plans, to ensure the effective growth and sustainable development of the city regions and regional and rural areas.

The National Development Plan (NDP) sets out the strategic investment priorities to implement the NPOs of NPF. €166 billion capital investment has been allocated for the 2018 – 2027 period. Projects identified for Limerick in the transport area, includes:

- Capacity expansion works at Shannon Foynes Port;
- M20 Cork to Limerick Road Scheme;

3.3.2 – Smarter Travel

A Sustainable Transport Future (2009-2020) Smarter Travel – A Sustainable Transport Future (2009-2020) is a government policy document which was launched in 2009. The policy document was prepared in the context of unsustainable transport and travel trends in Ireland. Notwithstanding the economic conditions of recent years, Ireland will still see significant car ownership levels, higher car usage levels, lower speeds and longer commute times, health issues, increased pollution and congestion, and an overall decline in quality of life in the coming years without intervention measures. The overall vision is to achieve a sustainable transport system in Ireland by 2020.

Limerick City is fast becoming one of the most progressive Irish cities in the field of healthier, more sustainable travel and was awarded the title of Ireland's first Smarter Travel Demonstration City in a national competition funded by the Department of Transport, Tourism and Sport (DTT&S) and co-funded by the European Regional Development Fund (ERDF) under the Southern & Eastern Regional Assembly (SERA) Operational Programme 2007 - 2013.

The initiative was run between 2012 and 2016 in partnership with University of Limerick. €9 million was awarded for the project which saw a host of infrastructural and behavioural change measures being rolled out in the four project area hubs; Castletroy, Corbally, Southside Regeneration Area and the City Centre. Significant work was carried out with school, business, industry and community groups to look at behavioural change and to carry out a number of infrastructural projects, including the City Centre to University of Limerick pedestrian and cycleway, schools initiatives and an annual bike week.

3.3.3 – Healthy Ireland

A Framework for Improved Health and Welling Being 2013 - 2015, Department of Health, 2016 through its National Physical Activity Plan and the Healthy Workplace programmes recognises and promotes the role of active travel as means to improve health. Limerick City & County Council co-ordinate and work in partnership with other agencies to implement Healthy Limerick as part of the Healthy Ireland initiative.

3.4 – Regional Planning Context

3.4.1 – Regional Spatial and Economic Strategy

The Regional Spatial and Economic Strategy sets out the regional planning policy for the Southern Region, there is significant emphasis on the area of transportation and permeability. The RSES sets out the following Regional Policy Objectives on Transportation. Having regard to the number of Regional Policy Objectives, a number of objectives have been summarised, to identify the key issues for Limerick.

Regional Policy Objective 139 – Low Carbon International Connectivity - the RSES recognises the need and supports actions to transition the movement of freight, ports and airports to a low carbon future.

Regional Policy Objective 140 - International Connectivity - It is an objective to sustain, maintain and enhance the regions international connectivity transport network, including the Trans European Network (TEN – T), which seeks the development of a Europe wide network of railway lines, roads, inland waterways, maritime shipping routes, ports, airports and railroad terminals. It is also critically important to sustainably maintain the strategic capacity and safety of the national roads and rail network including planning for future capacity enhancements to ensure effective land transport connections to the major ports, airports and markets. The RSES also outlines the importance the role of our strategic road and sustainable transport networks including connectivity to the TEN-T Core and Comprehensive Network, while also seeking to support infrastructure for electric and low carbon fuel infrastructure along TEN-T Core and Comprehensive Network.

Regional Policy Objective 141 – Regional Freight Strategy - The RSES sets out that It is an objective to support the development of a Regional Freight Strategy, which includes the consideration of rail freight, the asset of our region's rail network and innovations in the freight handling and transport sector potential for electrification, lower carbon fuels and technology to be prepared by the relevant stakeholders through in consultation with the Department of Transport, Tourism and Sports, Transport Infrastructure Ireland, National Transport Authority, Local Authorities, Irish Rail, relevant delivery agencies and the port and airport authorities. The RSES also seeks to support the feasibility of the delivery of a national freight and passenger hub in the region and reinstatement of freight lines on the regions rail network.

Regional Policy Objective 142 – Ports highlights the need to strengthen investment to deliver actions under the National Ports Policy, including investment in sustainable infrastructure, which strengthen and develop the strategic international, national and regional economic roles of our Tier 1 Ports including Shannon-Foynes Port and support the strategic role of our region's port and harbour assets under the National Marine Planning Framework; supports the export, fisheries, marine tourism and marine economy potential of port and harbour assets in the Southern Region as listed in Table 6.2 and support investment in the transition to smart technologies of port and harbour assets.

Critical to Limerick and the Shannon Estuary, the Regional Policy Objective supports the sustainable development of the 9 no. strategic development locations adjoining sheltered deep-water in line with the recommendations of the Shannon Integrated Framework Plan for the Shannon Estuary and subject to the implementation of mitigation measures outlined in

the SEA and AA undertaken on the SIFP. And seeks to ensure that development proposals will be subject to environmental assessment, implementation of mitigation measures outlined in applicable SEAs and AAs.

Regional Policy Objective 143 – Ports and Airports, highlights the critical role of the region's port and airport assets will be protected by ensuring that local land-use policies, subject to required planning and environmental processes facilitate and do not undermine their functions, and their landside access capacity, subject to consideration of environmental concerns including water quality, flood risks, human health, natural and built heritage.

Regional Policy Objective 144 – Port Infrastructure seeks to complement investment in port infrastructure by seeking the sustainable development of improved access infrastructure to ports from their regional catchments, including the promotion of rail access where practicable.

Regional Policy Objective 145 – Ports and Harbour Strategy for the Southern Region outlines that it is an objective to support the development of a Ports and Harbour Strategy for the Southern Region to be prepared by the relevant stakeholders through consultation with the Department of Transport, Tourism and Sports, Local Authorities, port authorities, TII, NTA and other relevant stakeholders, in accordance with appropriate environmental assessments.

Regional Policy Objective 146 – High Quality International Connectivity – Ports outlines a number of port development actions to achieve high quality international connectivity, which will be subject to the relevant environmental assessments, the relevant actions for Limerick include continued development and improvement of ports by the relevant responsible commercial State-Owned Enterprises consistent with sectoral priorities defined through National Ports Policy and continued support for the capital infrastructure projects in the Shannon Foynes Port Company Infrastructure Development Programme including capacity extension works and infrastructure investment towards deep water berthage on Foynes Island and offshore resources. The policy also seeks to strengthen and maintain access to ports through enhanced transport networks and improved journey times including support the N21/N69 (Foynes to Limerick Road Scheme including Adare bypass) and also seek Investment in maritime services programmes to support aids to navigation, Coast Guards and pollution prevention activities.

Regional Policy Objective 147 – Economic Opportunities of Ports seeks to protect the marine related functions of ports in the region including landside accessibility to ensure the future role of ports as strategic marine related assets is protected from inappropriate uses. It seeks to harness sustainable economic opportunities from the ocean economy and the role of Ports in the region in realising the full potential of the ocean economy, with particular reference to Government's integrated plan for the marine industry – Harnessing Our Ocean Wealth (2012), the National Marine Research and Innovation Strategy 2017-2021 (Marine Institute Ireland, 2017), and Ireland's Ocean Economy (NUIG, 2017), as well as the Marine Strategy Framework Directive and Ireland's Programme of Measures; and Ireland's forthcoming National Marine Planning Framework subject to the implementation of mitigation measures outlined in the SEA and AA undertaken where necessary. The policy also seeks to support the role of ports and facilitate their sustainable development, including off shore renewable energy development subject to relevant environmental assessments.

Regional Policy Objective 148 – National Aviation Policy outlines the need to seek investment to sustainably deliver actions under National Aviation Policy for Ireland that strengthen and develop the economic role of the national airports of Cork and Shannon and the regional airports of Kerry and Waterford, while protecting the functions of airports in the region including landside accessibility to ensure the future role of airports through land-use management of land-side areas to focus on the current and future needs of the airports.

Regional Policy Objective 149 – Airport Strategy for the Southern Region outlines the need to support the development of an Airport Strategy for the Southern Region to be prepared by the relevant stakeholders through consultation with the Department of Transport, Tourism and Sports, Local Authorities, Airport Authorities, TII, NTA and other relevant stakeholders in the Southern Region.

Regional Policy Objective 150 – High Quality International Connectivity – Airports – in line with the requirement of National Strategic Outcome in the NPF, the RSES seeks the following airport development actions for the region are identified subject to required appraisal, planning and environmental assessment processes, including continued sustainable development and improvement of enterprise assets, access infrastructure, airport infrastructure and services at Cork Airport and Shannon International Airport by the relevant responsible commercial State-Owned Enterprises as key economic drivers, national tourism and national business gateways consistent with sectoral priorities defined through National Aviation Policy, while also continuing to seek improved international connectivity.

Regional Policy Objective 151 – Integration of Land Use and Transport highlights the critical link that exists between land use and transport integration which is a key determinant in guiding development and identifies that:

- Urban-generated development, the development of lands, within or contiguous with the existing urban areas will be prioritised over development in less accessible locations;
- Residential development will be carried out sequentially, whereby lands which are, or will be, most accessible by walking, cycling and public transport– including infill and brownfield sites – are prioritised;
- Larger scale, trip intensive developments, such as offices and retail, will be focused into central locations highly accessible by sustainable transport modes;
- New employment and residential development will be consolidated and intensified in a manner which renders it serviceable by public transport and ensures that it is highly accessible, by walking, cycling and public transport. Within the Metropolitan Areas of Cork, Limerick and Waterford, except in limited planned circumstances, trip intensive developments or significant levels of development will not occur in locations which are not well served by existing or proposed high capacity public transport;
- Land use development in smaller rural towns will optimise public transport and sustainable travel integration within settlements. Public transport interchange will be facilitated to encourage modal shift to public transport and sustainable travel between settlements and on approach to settlements. The strategic transport function of national roads will be maintained and protected in accordance with national policy;
- All non-residential development proposals will be subject to maximum parking standards as a limitation to restrict parking provision to achieve greater modal shift;

- In locations where the highest intensity of development occurs, an approach that caps car parking on an area-wide basis will be applied; h. Infrastructure for Electric Vehicles will be integrated into developments;
- The design of all roads and streets within the urban areas, including suburbs, towns and villages within the 60 kph zone shall be as per the Design Manual for Urban Roads and Streets, being the designated appropriate road design standards for such locations.
- The protection of the Natura 2000 networks and the ecological linkages connected to the Natura 2000 network.

Regional Policy Objective 152 - Local Planning Objectives sets out the importance of the following in shaping our region:

- Deliver a high level of priority and permeability for walking, cycling and public transport modes, increasing with place context value as per the provisions of the Design Manual for Roads and Streets, to create accessible, attractive, vibrant and safe, places to work, live, shop and engage in community life;
- Measures to facilitate the complementary use of private car, through appropriate local traffic management including the siting of destination car-parking, is central to achieving the correct balance of modal use;
- Planning at the local level will prioritise walking, cycling and public transport by maximising the number of people living within walking and cycling distance of their neighbourhood or district centres, public transport services, and other services at the local level such as schools;
- New development areas will be permeable for walking and cycling and the retrospective implementation of walking and cycling facilities shall be undertaken where practicable in existing neighbourhoods, to a give competitive advantage to these modes;
- Where possible, developments will provide for filtered permeability. This will provide for walking, cycling, public transport and private vehicle access but at the same time will restrict or discourage private car through trips;
- To the extent practicable, proposals for right of way extinguishments will only be considered where these do not result in more circuitous trips for residents accessing public transport, or local destinations;
- Cycle parking will be appropriately designed into the urban realm and new developments at an early stage to ensure that adequate cycle parking facilities are provided and designed in accordance with cycle parking design guidelines; and
- For all major employment developments and all schools, travel plans with a strong emphasis on sustainable travel modes will be conditioned as part of planning permissions and be carried out in a manner consistent with published NTA guidance.
- Where space or other constraints prevent the full implementation of the provisions of the Design Manual for Roads and Streets, local authorities should be allowed to make their best reasonable efforts in the interests of providing accessibility for pedestrians and cyclists where inability to fulfil the requirements of the manual might otherwise mean that no accessibility improvement at all could be achieved.
- Support engagement with representatives of disability rights associations by local authorities when planning accessibility works to ensure that the perspective of vulnerable road users is taken into account.

Regional Policy Objective 153 – Capacity of Inter-Urban Road Connections outlines the need to protect, improve and maintain the operation of the National and Strategic Regional inter-urban road connections within and between the cities, settlements, ports and airports by providing effective policies in Local Authority County Development Plans (CDP), Local Area Plans (LAP) and Strategic Development Zones (SDZs), promoting effective traffic management and transport demand management. It is a requirement for CDP's, LAP's and SDZ's to consider all alternative modes and public transport options in tandem with traffic demand options.

Regional Policy Objective 154 – Land Use Plans shall ensure integration of transport and land use planning informed by the guiding principles expressed in the Regional Policy Objective for Integration of Land Use and Transport Planning.

Regional Policy Objective 155 – Managing the Region's Transport Assets sets out that the capacity and safety of the region's strategic land transport networks will be managed and enhanced including through the management of travel demand to ensure their optimal use. Enhancement to existing land transport networks shall be subject to robust feasibility, route selection, environmental assessment and planning processes that reduce impacts on the environment, while also promoting engagement between local authorities, stakeholder agencies and government departments for effective management of the region's strategic land transport networks.

Regional Policy Objective 156 – Steady State Investment seeks to strengthen Steady State Investment in our existing regional transport networks to ensure that existing networks are maintained to a high level to ensure quality levels of safety, service, accessibility and connectivity to transport users of all transport modes.

Regional Policy Objective 157 outlines that Local Transport Plans will be prepared for the key settlements by Local Authorities, based on the Area Based Transport Assessment (ABTA) guidance produced by NTA and TII and will be focused on, but not limited to, Key Towns as designated in the RSES and other towns as identified by Local Authorities, including towns in metropolitan areas as a complement to Metropolitan Area Transport Strategies. These transport plans shall seek to maximise the opportunities for the integration of land use and transport planning, assess the existing traffic, transport and movement conditions within the plan area and in its wider context and plan for the efficient and sustainable movement of people, goods and services within, including the extent to which estimated transport demand associated with local development objectives can be supported and managed on the basis of existing transport assets and considering sustainable and active travel.

Regional Policy Objective 158 – Intra-regional Rural Connectivity highlights the need to seek investment in the sustainable development of fully accessible infrastructure that strengthens intraregional rural connectivity including rural public transport services as life lines, which are important routes on the road network connecting communities in remote locations and smaller scaled settlements with larger scaled settlements to access important services.

Regional Policy Objective 159 – Role of Transport in Enabling Access for all seeks investment in transport networks and services in the region that are socially inclusive and provide a quality of service, connectivity and facilities to meet all societal needs disabilities (including mobility, sensory and cognitive impairments) and meet the needs of aging cohorts.

Regional Policy Objective 160 – Smart and Sustainable Mobility is set out in the NPF as a National Strategic Outcome, the importance in a shift to more sustainable means of transport cannot be underestimated, the Regional Policy Objective includes seeking investment in initiatives that leverage intelligent transport systems and smart transport services, which would include real time information for all transport systems. Recognises the importance of public transport networks and multi-modal interchange, support initiatives under the Department of Transport, Tourism and Sport to reduce congestion in our region's cities primarily by enhancing sustainable travel options through Smarter Travel projects that include traffic management, bus priority, urban cycling and urban walking routes. Reduction in the use of fossil fuels in public transport, investment in bus and rail fleet, delivery of a strategic bus network programme for Limerick, investment in park and ride facilities and delivery of a sustainable comprehensive cycling and walking network with emphasis on the Limerick metropolitan Area and support and investigate the feasibility of sustainable water transportation services for Cork Harbour, Shannon Estuary and Waterford Harbour.

Regional Policy Objective 161 – Smart Mobility - It is an objective to support the transformative potential of E- Mobility, autonomous vehicles, Mobility as a Service transport solutions and other emerging innovations in the transport and mobility sector through transport planning at regional, metropolitan and local level. Seek investment in actions and initiatives that position the region as a leader in the digital transformation of transportation, E-Mobility and sustainable mobility.

Regional Policy Objective 162 – Multi-Modal Travel Integration seeks to deliver on sustainable mobility, investment is sought in infrastructure to provide for integration between all modes of transport to support the use of sustainable travel choices. Further details will be developed and progressed through Metropolitan Area Transport Plans, Local Transport Plans, in City/ County Development Plans, Local Area Plans and SDZ's, including a wide range of options for example, bike and ride facilities; park and cycle facilities, park and car pool facilities, public bicycle sharing facilities, car sharing (Go Car type), Integration of cycling and public transport, carriage of bicycles on trains and (selected) buses, integrated ticketing to include bike and car sharing, integrated ticketing/cards across bike sharing, bus use, train use and car sharing and investigate the feasibility of Mobility Hubs for major developments or multi developments sharing the facility and the feasibility of e-scooter schemes.

Regional Policy Objective 163 - Sustainable Mobility Targets - It is an objective that through effective integration of land-use and transport planning, implementation of RPOs in the RSES and MASPs and actions driven through Development Plan, Local Area Plan, Metropolitan Area Transport Strategies and Local Transport Plans, significant progress is sought for the Southern Region to reduce the modal share of private car travel and increase the modal share of travel by walking, cycling, public transport and car sharing. Support the function of Metropolitan Area Transport Strategies and Local Transport Plans to achieve higher rates of modal shift to sustainable transport. National Smarter Travel Targets are supported which seek to achieve a reduction of work-related commuting by private car to 45% of modal share by 2020 and commuting by walking, cycling, public transport and car sharing to 55% of modal share by 2020. Such targets are nationwide average targets and higher achievement under lower tiered plans such as for metropolitan areas are supported.

Regional Policy Objective 164 – Metropolitan Area Transport Strategies – sets out that it is an objective to develop Metropolitan Area Transport Strategies for the Limerick - Shannon

Metropolitan Area by the NTA, TII, Local Authorities and relevant stakeholders integrating priorities for the metropolitan areas identified in the RSES Regional Transport Strategy and support investment in actions under these strategies subject to required appraisal, planning and environmental assessment processes for the sustainable development of transport infrastructure and services in the metropolitan areas over a 20 year period.

Regional Policy Objective 165 – Higher Densities outlines that Local Authorities, through appropriate Development Plan policies shall ensure the consolidation of development at higher densities within existing urban centres and provision of permeability (improved for existing areas and included in any new development, with a focus on locations where it can be demonstrated that such development supports the use of walking, cycling and public transport

Regional Policy Objective 166 – Investment in Strategic Inter Regional Multi-Modal Connectivity to Metropolitan Areas and Economic Corridors, it is an objective to achieve and maintain the sustainable development of infrastructure that strengthens the quality of inter-regional connectivity between the metropolitan areas of Cork, Limerick – Shannon and Waterford to each other and to other regions on the Atlantic Economic Corridor, extended Dublin-Belfast Eastern Corridor and to ports and airports. strengthen the quality of Cork to Limerick connectivity (proposed M20 and Rail) and Limerick to Waterford connectivity (N24 Cahir to Limerick Junction as identified in the NDP. While also maintaining the efficiency and safety of the existing national primary and secondary roads network by targeted transport demand management and infrastructure improvements and development of facilities for sustainable transport are supported in strengthening the quality of inter-regional connectivity

Regional Policy Objective 167 – National Road Projects policy objective highlights the provision of National Road Projects to be delivered during the period up to 2027 to achieve National Strategic Outcomes, which seeks to achieve Enhanced Regional Accessibility, subject to the required appraisal, planning and environmental assessment processes are supported. Under this RPO, where works to any part of the strategic road network are supported, the potential for improved sustainable transport shall be considered. The potential for nature-based design solutions for mitigation design shall be considered. Part (A) Projects Identified under the National Development Plan, Including Pre-Appraisal Stages in Limerick or affecting Limerick only:

- M20 Limerick to Cork Scheme;
- N21/N69 Foynes to Limerick Road Scheme (including Adare bypass);

The progression of the following National Road Projects at pre-appraisal stages to achieve NSO: Enhanced Regional Accessibility, subject to robust feasibility studies and site/route selection to reduce impacts on the environment and required appraisal, planning and environmental assessment processes:

- N21 Newcastle West bypass;
- N21 Abbeyfeale bypass;

Part (B) Other Projects

Under this RPO, for identified strategic road network improvements not included in the current NDP for the period 2018-2027, RSES seeks that:

- Government's current priorities remain in accordance with National Development Plan 2018 – 2027 priorities only.
- Improvements to national roads identified at a regional and local level will be done in consultation with and subject to agreement with TII in accordance with current project appraisal, environment and planning procedures.
- DTTS/TII may not be responsible for the funding of any such schemes or improvements.

The provision of the following projects are also supported as strategic regional priorities to achieve NSO Enhanced Regional Accessibility subject to the recommendations of the three MASPs, the preparation of associated Metropolitan Area Transport Strategies and the preparation of Local Transport Plans for key settlements and other urban centres where applicable. These measures are also subject to robust feasibility studies and site/route selection to reduce impacts on the environment and required appraisal, planning and environmental processes:

- Limerick Southside Accessibility Project M20/M7 Interchange;
- Limerick Northern Distributor Route (LNDR) connect N18 to M7;
- Upgrade and improve the N24 Limerick to Waterford Corridor.

Regional Policy Objective 168 – Investment in Regional and Local Roads – The following regional and local road and transport measures will be progressed to achieve NSO: Enhanced Regional Accessibility subject to the recommendations of the three MASPs, the preparation of associated Metropolitan Area Transport Strategies and the preparation of Local Transport Plans for key settlements and other urban centres where applicable. These measures are also subject to robust feasibility studies and site/ route selection to reduce impacts on the environment and required appraisal, planning and environmental assessment processes.

Under this RPO, where works to any part of the strategic road network are supported, the potential for improved sustainable transport shall be considered. The potential for nature-based design solutions for mitigation design shall be considered.

Part (A) Projects Identified Under the NDP Including Pre-Appraisal Stages

- Shannon Crossing;
- Coonagh to Knockalisheen Main Contract;

Part (B) Other Projects

Under this RPO, for identified strategic road network improvements not included in the current NDP for the period 2018 – 2027, RSES seeks that Government's current priorities remain in accordance with National Development Plan 2018 – 2027 priorities only.

- Limerick R527 Dock Road, R445 Dublin Road, R527 Tipperary Road;

Regional Policy Objective 169 – Strategic Road Network Improvement Priorities sets out that it is an objective to achieve and maintain investment in the sustainable development of strategic priorities in regional and local roads subject to required appraisal, planning and environmental assessment processes and in accordance with Guidelines on a Common Appraisal Framework for Transport Projects and Programmes for the Department of Transport, Tourism and Sport and in accordance with the general objectives of the RSES.

Regional Policy Objective 170 – Rail seeks to strengthen investment in the maintenance, improvement and strengthening of the rail network in the region, subject to appropriate environmental assessment and the outcome of the planning process. This will provide for future proofed infrastructures for rail in our transition to smart transport networks and low carbon society, improved journey times, services and passenger facilities to encourage greater use of rail travel between cities, towns and villages on the rail network across the region, take immediate actions to transition transport fleets to non-fossil fuel and renewable/ low emission energy sources. Optimisation of the existing rail network assets and the protection of these assets for our region's transition to greater levels of sustainable mobility, use of rail and achievement of lower carbon emissions. As identified in the National Development Plan, the Dublin – Limerick Junction/Cork rail lines are subject to an examination to move to higher speeds leading to improved connectivity to regional cities through improved rail journey times. An evaluation of the economic benefits of high-speed rail between Dublin-Belfast, Dublin-Limerick Junction and Dublin Cork against improvements to existing line speeds will be carried out against relevant appraisal processes and value-for-money tests required by the Public Spending Code by 2020;

Regional Policy Objective 171 outlines that it is an objective through the functions of the NTA, to seek the development of bus networks in the region focused on the following subject to appropriate environmental assessment and the outcome of the planning process, during the period of the RSES, to support the development of a bus service network development strategy for the region through the relevant stakeholders, investment in bus network and service improvements, network reviews for the larger settlements across the region, with a view to providing improved local bus services, review of bus services between settlements, review of local bus services throughout the region, including services to small towns and villages and the rural transport programme, new interchange facilities, new fare structure that fully integrates all public transport modes including bicycle share, car share etc. Such systems need to be easy to use and attractive for commuters to incentivise uptake, including carrying of bicycles on trains and inter-urban buses, enhanced passenger information, improvements to bus waiting facilities and bike-and- ride, support strategic bus networks (initiatives identified as Bus Connects in the NDP) through identification, safeguarding and phasing of strategic bus network Bus Connects routes throughout Southern Region's Cities and metropolitan areas, enhanced rural bus services including Local Link and community bus services, upgrade of bus fleet to low carbon/low emission, buses to be accessible for all and support direct inter-regional bus services between the cities and key access points such as airports.

Regional Policy Objective 172 – It is an objective to expand the development and expansion of the Local Link Rural Transport Programme by the NTA in the following manner, which seeks further integration with other public transport services, including HSE and school, better linkage of services between towns, villages and rural areas, ensures fully accessible vehicles operate on all services, enhances the customer experience, increases patronage among children and young people; and encourages innovation in the service.

Regional Policy Objective 173 – It is an objective to invest in the sustainable development of infrastructure and service improvements on the transport networks along our region's key tourism corridors, subject to robust feasibility studies to reduce impacts on the environment and required appraisal, planning and environmental assessment processes, including the Wild Atlantic Way, Ireland's Ancient East and Ireland's Hidden Heartland Corridors.

Regional Policy Objective 174 - The following walking and cycling objectives are supported and will guide investment subject to the required appraisal including delivery of the cycle network set out in the three regional cities' metropolitan area Cycle Network Plans, inclusive of key commuter routes and greenways subject to SEA and AA where required, delivery of cycle routes, Greenway and Blueway corridor projects to subject to appropriate site selection and environmental assessment processes, having regard to the Strategy for the Future Development of National and Regional Greenways July 2018, delivery of high-quality safe cycle route network across the region and cycling environments (applicable to cities, towns and villages) with provision for segregated cycle tracks, development of a safe cycling infrastructure to cater for the needs of all groups of cyclists, especially new cyclists, school children, elderly etc., safe walking and cycle routes especially in the approach to schools, greenways in the region shall be linked up to a network to improve connectivity within the region for walking routes and commuter cyclists in addition to recreational amenity functions, creating a safer environment for pedestrians and cyclists off the arterial roads shall be supported by large scale 30 km/h limits (except for main arterial roads) and adequate junction re-design, a cycle network that is coherent, continuous and safe, particularly when going through busy junctions, alternative "quiet" routes must be established and signposted for cycling and walking to improve the experience and uptake of active travel.

Furthermore the policy seeks that all significant development proposals shell be required to provide a Quality Audit, as referred to in the Design Manual for Roads and Streets, place walkability and accessibility by walking mode as a central objective in the planning and design of all new developments/new development areas, transport infrastructure and public transport services, enhance pedestrian facilities in all urban areas in the region, support sustainable pedestrian and cyclist greenway initiatives and the potential for inter connections between greenways subject to robust site selection processes and environmental assessment processes, support accessibility to walking routes for people with disabilities, a buffer distance shall be maintained between walking, cycling, Greenway and Blueway corridors and from coastal areas, particularly those subject to current and future erosion, as well as rivers and canals to ensure protection of riparian zones and such initiatives shall commit to feasibility and route selection studies with a view to identifying and subsequently avoiding high sensitivity feeding or nesting points for birds and other sensitive fauna.

Furthermore the RSES sets out a number of priorities for the Limerick – Shannon Metropolitan Transport Strategy, which include:

- The preparation of the Limerick – Shannon Metropolitan Strategy and associated Implementation Plan;
- The Development of enhanced citywide transport system with enhanced accessibility from the City Centre to the National Technological Park, Raheen Industrial Park, University of Limerick and Shannon International Airport;
- The improvement of accessibility to the City Centre through effective traffic management, reduced congestion and the improvement of modal choice. Development of a strategic metropolitan wide cycle network with several high capacity flagship routes catering for a range of journeys;
- The maintenance and enhancement of the national road network, catering for transport demand within the Limerick – Shannon Metropolitan Area for improved inter – urban/inter – regional connectivity/reduced journey times and for improved

access to international gateways, including Shannon International Airport and Shannon – Foynes Port through:

  - Delivery of the Government's current and proposed national road network improvement schemes relating to the Limerick Metropolitan Area and associated inter-urban connecting roads
  - The maintenance and optimisation of the strategic road network's capacity and utility, through the implementation of appropriate demand management measures
  - Support for inter-regional connectivity with the metropolitan area, enhanced regional connectivity through improved average journey times by road to Cork and Waterford via the proposed M20 Limerick to Cork and the possible enhancement of the N24 between Limerick and Waterford
  - To support inter-regional connectivity with the metropolitan area, enhanced road connectivity to Shannon- Foynes Port, including local by-passes via Foynes to Limerick (including Adare bypass) National Road Scheme. Maintenance of transport connectivity to Shannon International Airport.
  - Any planned works to the strategic road network will also consider the potential for improvement to sustainable transport.

- The Metropolitan Area local authorities have identified the requirement for the enhancement of regional and local roads network for improved connectivity within the Metropolitan Area through the following projects subject to required appraisal, planning and environmental assessment processes:
  - Limerick Northern Distributor Route (LNDR) regional road project;
  - Improved accessibility to Limerick Southside including the possible provision of a motorway interchange connection from the M20/M7 to Limerick Southside, subject to robust appraisal, planning and environmental assessment processes;
  - Upgrade of arterial roads from the motorway network to increase capacity including the provision of public transport infrastructure and park-and-ride, including R527 Dock Road, R445 Dublin Road, including Junction 28 and R527 Tipperary Road;
- The optimal use of the rail network including:
  - Connecting Limerick at a regional and national level to cater for the movement of people and goods;
  - Development and promotion of existing intercity rail and commuter links between Limerick and Dublin. Cork, Galway, together with Ennis, Nenagh, Thurles and Clonmel;
  - The commuter rail line between Limerick and Nenagh and onward intercity line to Ballybrophy is recognised as an important public transportation link to the wider city region and the RSES supports its upgrade and enhancement;
  - The ambition to create a rail link between Limerick City and Shannon International Airport;
  - Investigation of the possible re-instatement of the Limerick to Foynes rail line, linking Ireland's deepest port to the national rail network;
  - Improved rail journey times to Dublin and consideration of onward direct network connections. The Dublin to Limerick Junction/Cork rail lines are subject to an examination to move to higher speeds and/or electrification,

leading to improved connectivity and journey times to regional cities. An evaluation of the economic benefits of high-speed rail for the Dublin-Belfast, Dublin- Limerick Junction and Dublin-Cork lines against improvements to existing line speeds will be carried out against relevant appraisal processes and value-for-money tests

- The development of a metropolitan-wide cycle network focused on the City/ environs, with several high capacity routes, catering for a range of journey purposes.

3.4.2 – Mid – West Area Strategic Plan 2012 – 2030 – Planning, Land Use and Transportation Strategy (MWASP)

The Planning Authorities of the Mid-West Region (Clare County Council, Limerick City and County Councils and North Tipperary County Council) and the Mid-West Regional Authority have developed a non-statutory, 20-year, integrated land-use and transport strategy for the region in 2012. The MWASP provided a framework to help guide decision making with regard to the physical and spatial development of the Region to 2030, and to promote balanced growth throughout the region to achieve the maximum social, economic, health and cultural benefits for all its citizens. While it was informed by the Mid-west Regional Planning Guidelines which have been replaced by RSES, nevertheless the MWASP informed the RSES policy objectives which the Limerick Development Plan must adhere to.

3.5 – Local Planning Policy

3.5.1 – Proposed Limerick – Shannon Metropolitan Area Transport Strategy (LSMATS)

Limerick City and County Council in partnership with The National Transport Authority is commencing the process of developing a new Limerick – Shannon Metropolitan Transport Strategy. The purpose of the strategy is to deliver an integrated Transport Strategy for the Limerick – Shannon Metropolitan Area and to promote and encourage sustainable transport. The Strategy will set out a series of actions and measures, covering infrastructural, operational and policy elements to be implemented in Limerick – Shannon Metropolitan Area over the next 20 years and will outline a framework to deliver the projects in a phased manner. The strategy will take account of current and predicted population, the National Planning Framework – Ireland 2040, national transport policies, existing plans and strategies in the region, existing transport assets and opportunities. Public consultation on the proposed Strategy is imminent.

3.5.2 – Limerick Metropolitan District Movement Framework Study

Limerick City and County Council prepared the Limerick Metropolitan District Movement Framework Study, which includes a long-term vision for the Limerick Metropolitan District in terms of accessibility, mobility and sustainability, and also an implementation plan for comprehensive measures to upgrade the existing transportation network over a 5-year period, with a particular emphasis on prioritising and facilitating movement via sustainable modes of transport

3.5.3 – Newcastle West Walking and Cycling Strategy, 2013

Under the Active Travel Towns Initiative as part of Smarter Travel the Newcastle West Walking and Cycling Strategy was prepared by the Council in 2013. The principal objective of Active Travel Towns programme is to achieve modal shift from car to either walking and/or cycling in towns. The objective of the strategy commissioned by the Council was to make recommendations and suggest measures to increase the public's awareness of the benefits of walking and cycling as a viable mode of transport around the town. It recommends a number of engineering interventions including greenways along the River Arra, between the Great Southern Trail and Sycamore Crescent, and between the Cork Road and the N21. Soft measures to address modal shift such as promoting sustainable travel in the town are also included in the strategy.[2]

3.5.4 – Limerick City Cycle Network Strategy

The Limerick City Cycle Network Strategy was launched in May 2004. The vision of the Cycle Network Study is: "To develop a consistent, clear and continuous network of urban and suburban cycle networks throughout the Limerick Metropolitan Area to ensure cycling becomes a realistic choice as a mode of transport. The network will facilitate and maximise commuting, tourist, recreational and leisure cycling trips. The network will support sustainable economic growth, and include linkages to key transport hubs within the area transforming Limerick Metropolitan Area into an attractive location for cyclists of all ages and abilities." It identifies new routes and improvements to the cycleway network across the City and the Environs.

3.6 – Limerick's Current Position

Limerick, similar to the national experience is not achieving the targets of sustainable travel as adopted by Government in 2010. This is despite significant investments since 2010 on improving infrastructure including cycleway networks, the Limerick Coco Cola Zero bike scheme, improvements to bus infrastructure, including improved bus stops with real time information display, priority bus routes, fleet upgrades, revision of and expansion of public transport routes, and community awareness initiatives to encourage modal shift away from the private car to more sustainable means of travel, including public transport, cycling and walking. The challenge for the Limerick Development Plan is to assist a societal shift in thinking of depending on the private car for commuting to the more environmental, active and sustainable travel modes of walking, cycling or future self-propelled means such as e-scooter networks. The Limerick Development Plan must also continue to facilitate public transport as a viable and accessible option for the people to use as a means of travel. In tandem with such a societal change the environmental quality, in particular, the air quality will improve, having beneficial consequences for health and wellbeing of its citizens.

Analysis from the Central Statistics Office, from the Census in 2016, in relation to travel and transport have returned the following information.

Nationally, the 2016 Census established that 56% of daily commuters drive, and 5% commute as a passenger in a private vehicle. In the State overall, 61.4% of commuters travelled by private car in 2016. Thus, the Smarter Travel target of 45% of commuters travelling by car by 2020 has not been achieved. One of the most notable changes in commuting patterns

[2] https://www.limerick.ie/sites/default/files/cycling_and_walking_strategy_for_newcastle_west.pdf

nationally between 2011 and 2016 was the sharp rise in the number of people who cycled to work, the numbers rose by nearly 43%. The numbers walking to work in 2016 increased by 3% from 2011 Census, although walkers accounted for less than 1 in 10 of the commuting population in 2016. Nationally, the numbers commuting by public transport increased by 21% between 2011 and 2016. While there has been an upwards trend nationally in use of public transport, walking and cycling, this has not been sufficient to reach the national target for the commute by private car as set out in Smarter Travel. The number of commuters by private car increased by 8% between 2011 and 2016. Five percent work mainly from home and do not have a daily commute according to the 2016 Census.

Despite improvements to sustainable transport infrastructure, under Smarter Travel in the Census the percentage commuting by car as drivers has increased from 40% in 2011 to 59% in 2016 in Limerick City and Suburbs. Commuters choosing to travel as a car passenger decreased from 18% in 2011 to 6 % in 2016. Further analysis of the Census indicates 62% of North side commuters travel by car, 69% commute by car in Castletroy, and 71% commute by car in the Southern Environs. Commuting by walking has declined since 2011. In 2011, 25% walked their daily commute but by 2016 only 15% walk their daily commute. The use of the bicycle for the daily commute has remained static at 3% between 2011 and 2016. The use of public transport to commute remains approximately at 5%.

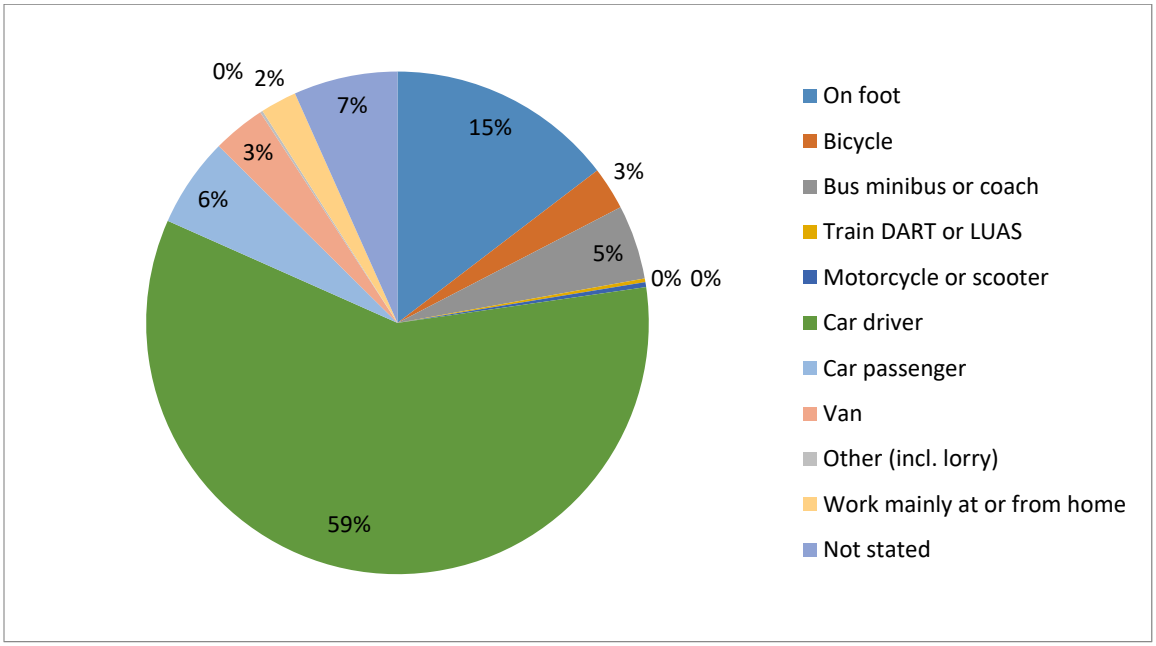

Figure 1 – Aged 5+ by mode of transport to work, school or college Limerick City and Suburbs, Census 2016

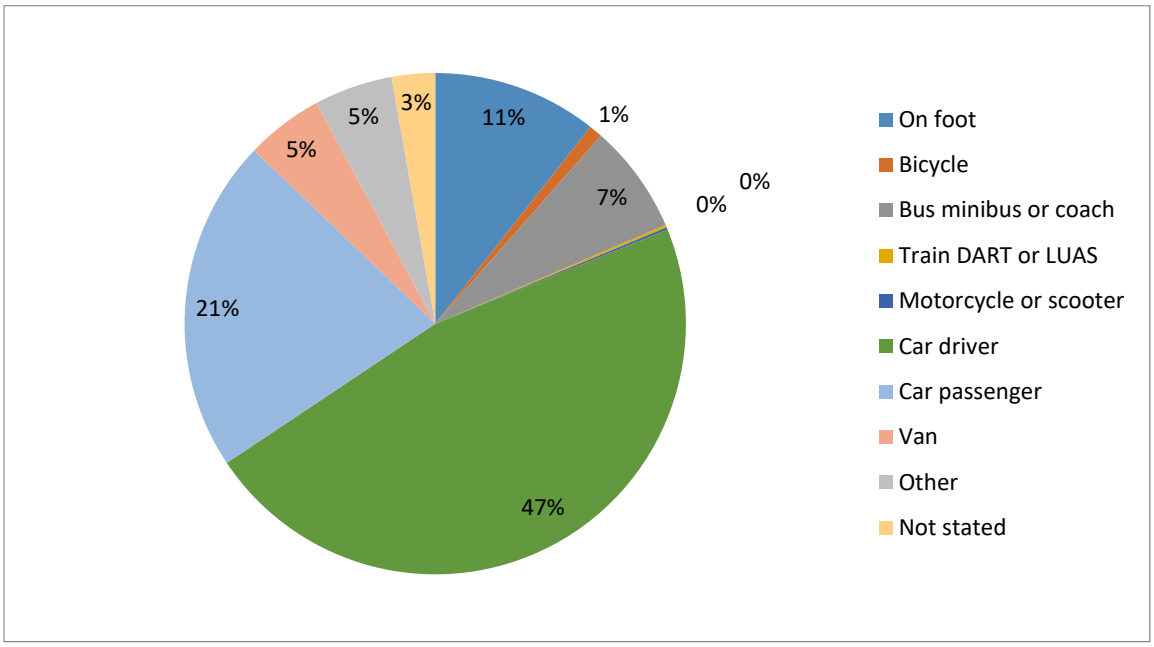

Figure 2 - Aged 5+ by mode of transport to work, school or college Limerick County, Census 2016

In terms of journey time as a commute to work, school or college 34.5% of commuters in Limerick City and Suburbs travel less than 15 minutes, 37% percent travel 15 minutes – 30 minutes, 71% travel less than 30mins on their commute according to the 2016 Census. The average commute time in the State according to 2016 Census is 28.2 minutes

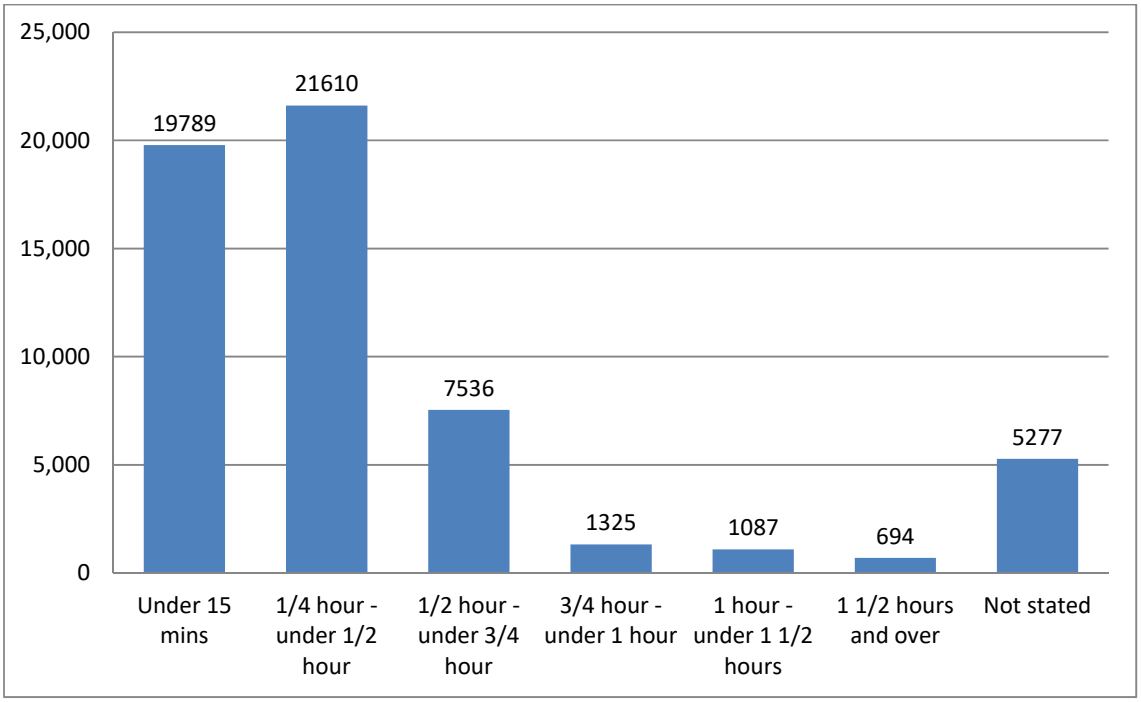

Figure 3 – Limerick City and Suburbs – Aged 5+ journey time to work, school or college, Census 2016

Limerick City has a number of the educational and employment hubs reflecting the City's status as the regional city in the Mid-west. These include the Raheen Business Park, Annacotty Business Park, the National Technology Park in Castletroy, the third level institutions - University of Limerick, University of Limerick – Mary Immaculate, and Limerick Institute of Technology, and the University Hospital Limerick Campus in Dooradoyle. Powcar analysis of the 2016 Census demonstrates the modal split of commuting to these education and employment hubs. Figure 4 below indicates that the greatest percentages of workers as commuters to these locations are car drivers and an average of 33% of third level students drive as their commute. The highest percentages of walkers commuting are associated with the Mary Immaculate campus, University of Limerick and Limerick Institute of Technology. Cycling and use of buses is comparatively low to all these destinations.

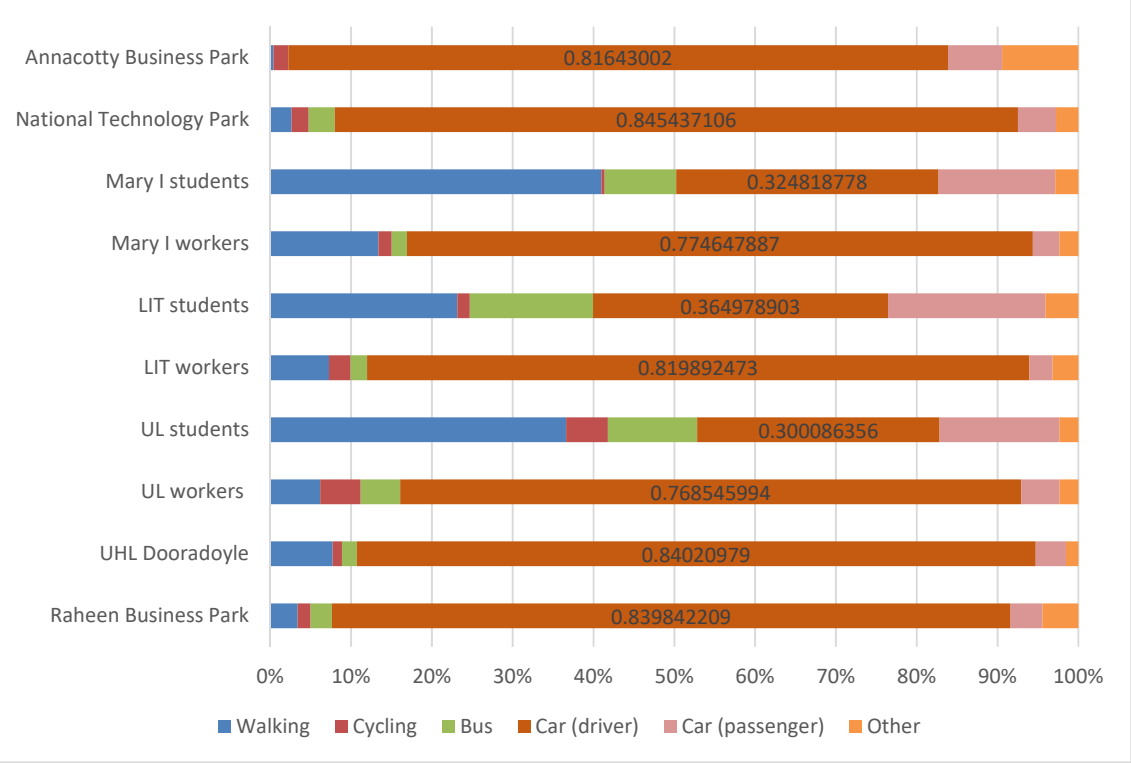

Figure 4 - Modal split of daily commute to Limerick City and Suburbs, Employment and Education hubs, Census 2016

3.7 Electric Vehicles (EVs) and Low Emissions Vehicles (LEVs) – Limerick

In 2017, the transport sector was the second largest contributor of non-ETS emissions in Ireland, accounting for over 27% emissions; it is projected that over the period 2017-2030 transport emissions could potentially increase by 17-20% depending on the level of policy intervention. The transport sector therefore has a key role to play in the national decarbonisation effort and the transition to low emission vehicles is a necessary step-change to effect a substantial reduction in transport emissions.

Most importantly, it is projected that the use of conventionally fossil fuelled vehicles will rapidly recede as new technologies develop and consumer confidence increases. As of 31st December 2018, there were over 2.71 million licensed (taxed) vehicles on Irish roads. Private cars accounted for the majority of these vehicles (over 77%); therefore the primary source of land transport emissions in 2017 were from the private car sector (c. 52%). While there are no certainties in predicting future technologies, the full electrification of the national car fleet represents a feasible option. Indications from car manufacturers and energy market analysts suggest that mass market adoption of EVs is probable.

Limerick has twelve charging points in the City and eight points in the County at the following locations;

Limerick City and Environs

- Circle K / Topaz Service Station, Thomondgate,
- Merchant's Quay, Limerick City (ESB) located on the public road,
- Bedford Row, Limerick City (ESB),
- Milk Market, Mungret Court, Limerick City (ESB), located on the public road,
- Bishop's Quay, Limerick City (ESB),located on the public road,
- Pery Street, Limerick City (ESB),located on the public road,
- Pery Square, Limerick City (ESB),located on the public road,
- Foundation Car Park, University Concert Hall, UL (ESB),
- Circle K / Topaz Service Station, Ballysimon Road, Limerick City,
- Limerick Nissan, Delta Retail Park, Ballysimon Road, Limerick City, and
- Lidl, Childers Road, Limerick City.

Limerick County

- Woodlands House Hotel, Croom Road, Adare, Co. Limerick (ESB),
- Heritage Centre Parking, Main Street, Adare, Co. Limerick (ESB),
- Adare Manor Hotel and Golf Resort,
- Adare Manor Villas,
- Reidy's Circle K / Topaz Service Station, Foynes,
- Garvey's Centra Service Station, St. Mary's Road, Newcastle West, Co. Limerick (ESB),
- Church Street, Newcastle West, Co. Limerick (ESB), located on the public road, and
- Off Grove Crescent, Abbeyfeale, Co. Limerick (ESB), located on the public road.

Analysis by the Council indicates that Limerick has had a continuous increase in the number of the new EV/Hybrid vehicle registrations since 2010 in line with national trends. Refer to Table 1 below.

Year	National Figures - total	Limerick Figures - total
2010	754	17
2011	599	15
2012	773	20
2013	631	16
2014	1,257	27
2015	2,082	51
2016	3,260	101
2017	5,383	160
2018	8,899	263
2019	14,984	454

Table 1 - New EV/Hybrid Registrations in Ireland 2010 – 2020 Source: cso.ie and stats.beepbeep.ie

From 2015 to 2019, the average yearly increase in national electric vehicle sales was 50%. The average yearly increase for the same period in Limerick was 53%. If the rate of growth in EV sales figures continues to grow at a similar rate to the period 2015-2019 there could be almost 6,000 new EVs/hybrids being registered in Limerick in 2025. Even a conservative estimate would put the figure for that year at approximately 4,500. There is reason to believe that they will continue to grow at that rate as EV and hybrid ownership is incentivised on a national level, and we become more environmentally conscious as a society. However, it is difficult to assess what impact the Covid-19 pandemic will have on the economy for the next few years, and how car sales in general will be affected.

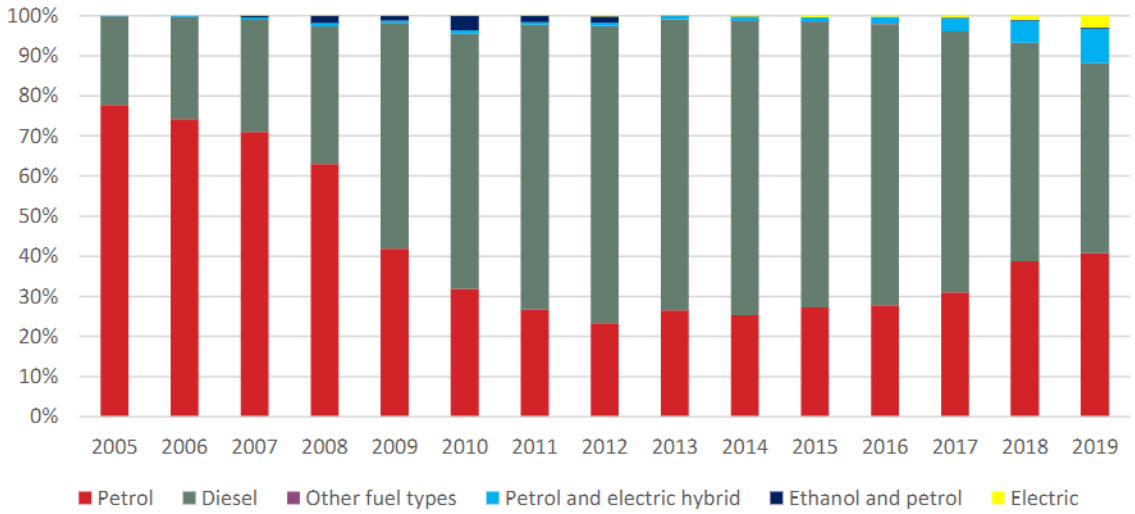

Figure 5 Newly registered cars from 2005 – 2019 by fuel type in State

3.8 – Conclusion

Limerick is identified as a growth centre in the National Planning Framework, in order to accommodate this proposed growth to 2040, there is a need to have a high quality, accessible and affordable transportation system, which allows for the fast movement of people to and from employment and education hubs, in line with the requirements of national policy on climate mitigation and adaption.

There is a need for an Integrated, multi-modal transport network that supports vibrant, accessible urban centres across Limerick City and County, at appropriate scale for the designated settlement. There is also a need for better integration of land use, transport planning, and intermodal connectivity infrastructure investment ensuring that land use zoning and development densities provide the critical mass of population and associated movement to sustain high quality transport networks offering real options of choice to the commuter and the freight distributor.

4.0 – Infrastructure

4.1 – Introduction

Infrastructure refers to the necessary, basic of systems of the water supply, wastewater disposal, waste management, electricity networks and gas networks for a modern well-functioning region, city and society. Water services are critical determinants of the development process as the future growth of settlements is contingent upon the timely delivery of a quality public water supply and waste water disposal system. Similarly, economic development and attracting inward investment and employment opportunities are dependent on the quality of water supply and disposal of effluent.

4.2 – Legalisation and Policy Context

4.2.1 – European Planning Policy Context

The European Commission sets policy and compliance standards for water, wastewater management, and energy networks for gas and electricity across the EU to safeguard quality and to ensure the sustainability these resources. The Commission achieves this via Directives. These Directives are transposed into Irish law through legislation (Acts) and various regulations.

4.2.2 Water Services

The European Commission sets environmental policy and compliance standards for water and wastewater management across the EU to safeguard quality and to ensure the sustainability of water and environmental resources. The Commission achieves this via the following policy Directives:

- The Drinking Water Directive – 98/83/EC;
- The Urban Waste Water Treatment Directive - 91/271/EEC, and
- The Water Framework Directive – 2000/60/EC.

The Drinking Water Directive sets the standard of water for human consumption across member states. Its objective is to protect human health from the effects of contamination, by ensuring that drinking water provided is clean and fit for human consumption. The Urban Waste Water Treatment Directive sets the standard for the protection of the water environment from the adverse impacts of the release of treated and untreated sewage and other industrial discharges. Its objective is to ensure that member states deliver plans to arrest and reverse pollution of water resources and to achieve “good” water quality status.

These Directives are transposed into Irish Law by the Drinking Water Regulations SI.122 of 2014 and the Waste Water Treatment Regulations SI.254 of 2001, setting out in the standards that are to be met for the country to be in compliance with the Directives. It is the role of the Environmental Protection Agency (EPA), as the Environmental Regulator in Ireland for water and wastewater services under the EU policy directives above, to monitor and enforce the standards set in the regulations to protect consumers, and to ensure the implementation of the Directives. The Health Services Executive (HSE) has a key role in assessing and advising on potential risks to public health and safety.

4.2.3 Waste Management

There are a number of EU Directives dealing with waste management. These include the following:

- Integrated Pollution Prevention and Control Directive (1996/61/EC)
- Waste Framework Directive (2008/98/EC)
- Directive on the disposal of polychlorinated biphenyls and polychlorinated terphenyls known as the PCB/PCT Directive (96/59/EC)
- Sewage Sludge Directive (86/278/EEC)
- Landfill Directive (1999/31/EC)
- Directive on the incineration of waste (Directive 2000/76/EC)
- Packaging Waste Directive (Directive 94/62/EC)
- End-of-Life Vehicles Directive (Directive 2000/53/EC)
- Electrical and Electronic Waste (WEEE) Directive (2012/19/EU)

These Directives are transposed into Irish law through the Environmental Protection Agency Act 1992, the Waste Management Act 1996, the Waste Management (Amendment) Act 2001, and the Protection of the Environment Act 2003. Waste policy and legislation are implemented by the Environmental Protection Agency and the local authorities.

The current national waste management policy is set out in A Resource Opportunity – Waste Management Policy in Ireland which establishes Government policy on eliminating landfill, reducing the amount of waste produced and maximising waste as a source of products and renewable energy.

4.3 – National Planning Context

As set out above the National Planning Framework sets out the national planning context for the development of the country to 2040.

4.3.1 – Water and Wastewater

The NPF deals with water service infrastructure as part of National Strategic Outcome 9 – Sustainable Management of Water and other Environmental Resources. Water services are considered critical by the Government for Ireland's environmental and economic wellbeing. Conserving and enhancing water quality will become increasingly important given the ambitious population targets and employment growth nationally and for Limerick.

The NPF sets out the following National Policy Objectives in relation to infrastructure, including water and wastewater.

National Policy Objective 63
Ensure the efficient and sustainable use and development of water resources and water service infrastructure in order to manage and conserve water resoucrces in a manner that supports a healthy society, economic development requirements and a cleaner environment.

National Policy Objective 57
Enhance water quality and resource management by:

- Ensuring flood risk management informs place-making by avoiding inappropriate development in areas at risk of flooding in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities;

- Ensuring that River Basin Management Plan objectives are fully considered throughout the physical planning process;
- Integrating sustainable water management solutions, such as Sustainable Urban Drainage(SUDS), non-porous surfacing and green roofs, to create safe places.

The NPF deals with waste management infrastructure as part of National Strategic Outcome 9 – Sustainable Management of Water and other Environmental Resources. As with Water services, waste managment is considered critical by the Government for Ireland's environmental and economic wellbeing. Government policy encourages improving our capacity to create beneficial uses from products previously considered as waste, creating circular economic benefits. The following is the policy objective for waste management established by the NPF.

National Policy Objective 56
Sustainably manage waste generation, invest in different types of waste treatment and support circular economy principle, prioritising prevention, reuse, recycling and recovery, to support a healthy environment, economy and society.

The NPF identifies that nationally, planning for waste treatment requirements to 2040 will require:

- Additional sewage sludge treatment capacity and a standardised approach to managing waste water sludge and including options for the extraction of energy and other resources;
- Biological treatment and increased uptake in anaerobic digestion with safe outlets for bio-stabilised residual waste; and
- Waste to energy facilities which treat the residual waste that cannot be recycled in a sustainable way delivering benefits such as electricity and heat production.

4.3.2 – Draft Water Services - Guidelines for Planning Authorities, 2018
Under Section 28 of the Planning and Development Act 2000 (as amended) planning guidance documents are issued for specific types of development. The Draft Water Services - Guidelines for Planning Authorities, 2018, Dept of the Housing, Planning and Local Government were published, and Limerick City & County Council must have regard to these guidelines to inform policy and when assessing planning applications in relation to water services.

The role of these Guidelines is to;

- actively manage the interface between spatial planning, development and public water services, and
- ensure the quantum, location and distribution of planned development must have regard to the capacity of public water services and to make the most efficient use of and maximise the capacity of existing and planned water service infrastructure.

Therefore, water services are key considerations when determining the Core Strategy, population growth and settlement hierarchy of Limerick. It also has a role in the economic development of the City and County. Inward investment and employment opportunities are attracted to high quality water service systems.

4.3.3 – Waste Management

Waste management also overlaps in to National Outcome 8 Transition to a Low-carbon Economy and Climate Resilient Society given the potential of new waste treatment processes generating energy for export to national grid, or district heating networks and energy for business.

The National Development Plan foresees that capacity increased in waste facilities, including anaerobic digestion, hazardous waste treatment, plastics processing, recycling, waste to energy, and landfill and landfill remediation, to meet future waste objectives. The infrastructure to deliver waste management policy has been, to date, largely delivered through private investment with some public sector investment. The NPF recognises that significant infrastructure capacity development will be required to separate and process various waste streams at municipal and national levels to achieve new EU legally-binding targets and the additional investment may include a potential role for public investment.

4.3.4 – Electricity and Gas Networks

Modern economies and societies are dependent on reliable and secure supplies of electricity and gas. The Sustainable Energy Authority of Ireland (SEAI) monitors energy consumption in Ireland. A general trend is the growth in energy demand with improving during the 2005 – 2018 period. The SEAI reports that both electricity and natural gas experienced overall growth potential growths during this period of 11.5% and 42.3% respectively[3]. Nationally, final energy consumption of electricity increased by 4.4% in 2017 - 2018. In 2018, electricity accounted for 18.9% of total final consumption. Final energy use of natural gas increased by 6.9% in 2018. It accounted for 15.8% of total final consumption in 2018.

Fossil Fuel	Overall Growth % 2005 - 2018	% share of final energy 2005	% share of final energy 2018
Natural Gas	42.3	10.9	15.8
Electricity	11.5	16.6	18.9

Table 2 – Growth rate, quantities and shares of final energy for electricity and gas

Source: Energy in Ireland Report 2019, SEAI

The NPF deals with electricity under National Strategic Outcome 8 - Transition to a Low-carbon and Climate Resilient Society. New energy systems and transmission grids will be necessary for a more distributed, renewable focused energy generation system, harnessing both the considerable on-shore and off-shore potential from energy sources such as wind, wave and solar and connecting the richest sources of that energy. The diversification of our energy production systems away from fossil fuels and towards green energy such as wind, wave, solar and biomass, together with smart energy systems and the conversion of the built environment into both generator/consumer of energy and the electrification of transport fleets will require the progressive and strategic development of a different form of energy grid. The Limerick Development Plan must comply with the current Government policies in relation to new energy generation, energy security, and distribution with access for all. The following is the policy objective for electricity established by the NPF.

[3] Energy in Ireland Report 2019, SEAI, Table 1, Growth rate, quantities and shares of final energy, page 15

National Policy Objective 42
To support, within the context of the Offshore Renewable Energy Development Plan (OREDP) and its successors, the progressive development of Ireland's offshore renewable energy potential, including domestic and international grid connectivity enhancements.

Strategic investment priorities according to the NDP impacting electric energy includes:

- the transition of a low-emission public transport system including urban elective bus fleets – will an impact on electricity demand and infrastructure;
- at least 500,000 electric vehicles on the road by 2030 with additional charging infrastructure to cater for planned growth;
- expansion of the refueling network for alternately fueled vehicles to address freight emissions;
- ongoing reinforcement of existing power grid, and security of power;
- enhanced electricity interconnection;
- and piloting of 'climate-smart countryside' projects to establish the feasibility of the home and farm becoming net exporters of electricity through the adaptation of smart metering, smart grids and small-scale renewable technologies, for example, solar, heat pumps and wind.

The Strategic Priories of the NDP for gas includes:

- Development of gas infrastructure projects to support regional and rural development, and the low-carbon transition of society,
- Town-scale pilots of food and agricultural waste to gas in agricultural catchments for local gas, and
- Network supply and biogas production.

4.3.5 - The Water Services Act 2013

A critical legislative change was introduced by the Water Services Act 2013. This Act established Irish Water (IW) as an independent State utility company, and the transferral of responsibilities for all aspects of public water services, delivery and operation from local authorities to Irish Water since 1st January 2014. Local Authorities are agents for Irish Water and provide water services functions through service level agreements. The purpose of the transfer of water services from the Local Authorities to IW was to provide a more strategic approach to water services planning, investment and delivery of secure and sustainable water services nationally.

Irish Water is responsible for:

- Water Supply – extraction of raw water from sources (wells, rivers, lakes and reservoirs) for public water consumption, treatment of this water to potable water standards, storage of potable water and delivery to water to premises.
- Waste Water – collection of waste water from premises and delivery to WWTP, treatment of the waste water to EU environmental standards, discharge of the treated waste water to suitable receiving environment, and the treatment and disposal of sludge generated from not the water supply and waste water treatment processes.

IW is not responsible for the management of private water services schemes, private systems/schemes including private wells, and septic tanks/effluent disposal systems. Where public services are available developers are expected to connect to the public where feasible, following pre-connection consultation and evidence of consent from IW permitting the connection. Surface water management and flood prevention remain the responsibility of the Local Authorities and the Office of Public Works (OPW).

Water Service legislation requires Irish Water to prepare a Water Services Strategic Plan (WSSP), an integrated national plan for the delivery of a transformed water and wastewater network for a 25 years period. IW also publishes an annual strategic funding plan outlining the arrangements for the implementation of the WSSP for the year. The Limerick Development Plan must reflect the policy and objectives of the WSSP. Other IW strategic plans that Limerick City & County Council must assist IW to implement are listed below and are available on water.ie/our-plans. These are;

- National Water Resources Plan (NWRP) identifies how IW will provide a sustainable, secure and reliable water supply whilst safeguarding the environment. It is a 25 year strategy to ensure we have a sustainable, secure and reliable public drinking water supply.
- National Wastewater Sludge Management Plan (NWSMP) sets out a nationwide standardised approach to ensure that treated public wastewater sludge across the country is effectively managed, stored, transported and re-used or disposed of in a sustainable way, to the benefit of the public and the environment we all live in.
- Lead in Drinking Water Mitigation Plan to identify how we are tackling national issues like the impact of lead pipes on drinking water.

Irish Water in its role as a prescribed body under the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001(as amended) guide Planning Authorities in relation to water services through its recommendations on planning applications and on statutory development plans. Irish Water is a statutory consultee for Development Plans and Local Area Plans under the Planning and Development Act 2000 (as amended) and must be formally notified at prescribed stages in plan making, review or variation processes.

4.4 – Regional Spatial and Economic Strategy

4.4.1 Water supply

The RPOs for water supply infrastructure are listed below

RPO 208 – Irish Water and Water Supply

It is an objective to:

a) Support the implementation of Irish water Investment Plans (prepared in five-year cycles) and subsequent investment plans and seek such plans to align the supply of water services with the settlement strategy and objectives of the RSES and Metropolitan Area Strategic Plans for Cork, Limerick-Shannon and Waterford;

b) Support the role of Irish Water Investment Plans in taking into account seasonal pressures on critical service infrastructure, climate change implications and leakages reduction in the design of all relevant projects;
c) Deliver and phase services, subject to the required appraisal, planning and environmental assessment processes and shall avoid adverse impacts on the integrity of the Natura 2000 network;
d) Local Authority Core Strategies shall demonstrate compliance with DHPLG Water Services Guidelines for Planning Authorities and demonstrated phases infrastructure led growth to meet demands on water supply, suitability of new and/or existing drinking water sources (for example, hydromorphological pressures), and prevent adverse impacts on the integrity of water dependant habitats and species within the Natura 2000 network.

RPO 209 – Strategic Water Supply Projects

It is an objective to support investment and the sustainable development of strategic water supply projects by Irish Water and relevant local authorities, arising from initiatives including Investment Plans, 25 Year Water Supply Plans for our Region's cities and metropolitan areas, leakage reduction programmes and initiatives through the National Water Resources Plan subject to appropriate environmental assessment and the planning process.

RPO 210 – Drinking Water Protection Plans

It is an objective to support the development of the Drinking Water Protection Plans in line with the requirements of the Water Framework Directive and the current and future cycles of the River Basin Management Plans. In this regard, the RSES supports the inclusion of objectives in the County Development Plans relating to the provision of mitigation and protection measures for all protected areas, including Drinking Water Protection Areas and associated Source Protection Plans.

4.4.2 Waste Water

The RPOs for waste water treatment infrastructure are listed below.

RPO 211 – Irish Water and Waste Water

It is an objective to support the implementation of Irish Water Investment Plans (prepared in five year cycles) and subsequent investment plans, to align the supply of wastewater treatment facilities with the settlement strategy and objectives of the RSES and Metropolitan Area Strategic Plans for Cork, Limerick-Shannon and Waterford. Support the role of Irish Water Investment Plans in taking into account seasonal pressures on critical service infrastructure, climate change implications and leakage reduction in the design of all relevant projects.

RPO 212 – Strategic Waste Water Treatment Facilities

a) It is an objective to support investment and the sustainable development of strategic wastewater treatment facilities by Irish Water in the Region arising from initiatives including Investment Plans, Strategic Drainable Areas Plans subject to appropriate environmental assessment and the planning process.
b) For the management of wastewater increasing population growth should be planned on a phases basis in collaboration with Irish Water and the local authorities to ensure

that the assimilative capacity of the receiving environmental is not exceeded and that increased wastewater discharges from population growth does not contribute to degradation of water quality and to avoid adverse impacts on the integrity of the Natura 2000 network.

RPO 213 – Rural Wastewater Treatment Programmes

It is an objective to support investment in the sustainable development of rural waste water treatment programmes and support the initiatives of Irish Water, local authorities, communities and developers in small rural settlements to identify sustainable solutions subject to available funding for such services including the Rural Regeneration and Development Fund of the NDP. Investment in Rural Wastewater and Treatment Programmes will be subject to settlement hierarchies and core strategies set out in development plans.

RPO 214 – Eliminating Untreated Discharges and Long-term Planning

It is an objective to support Irish Water and the relevant local authorities in the Region to eliminate untreated discharges from settlements in the short-term, while planning strategically for the long-term in tandem with Project Ireland 2040 and the RSES and in increasing compliance with the requirements of the EU Urban Waste Water Treatment Directive.

RPO 215 – Separation of Foul and Surface Water Networks

Development Plan shall support strategic wastewater treatment infrastructure investment and facilitate the separation of foul and surface water networks to accommodate the future growth of the Region.

RPO 216 – Servicing for Rural Villages

It is the objective to support the servicing of rural villages (serviced sites) to provide an alternative to one-off housing in the countryside.

4.4.3 Waste Management

The RSES for the Southern Regional includes Regional Policy Objectives for the Regional Waste Management Plan for the Southern Region 2015 – 2021 (RPO 107), and the EU Action Plan for the Circular Economy (RPO 108). These policy objectives will inform the policy objectives of the Limerick Development Plan. The RPOs are:

RPO 107 – Regional Water Management Plan for the Southern Region 2015 – 2021

It is an objective to support innovative initiatives that development the circular economy through implementation of the Regional Waste Management Plan for the Southern Region 2015 – 2021 and its successor.

RPO 108 – It is an objective to support the work of local authorities, the Regional Waste Management Office, and all state bodies in the Region to implement the EU Action Plan for the Circular Economy – Closing the Loop to ensure sustainable patterns of consumption and production in the areas of;

- Product Design
- Production processes
- Consumption

- Waste management, and
- From waste to resources; boosting the market for secondary raw materials and water reuse in line with the EU Raw Material Initiative.

4.4.4 Electricity and Gas Networks

In relation to Data Centres RSES highlights that the Government statement on the role of Data Centres in Ireland's Enterprise Strategy published June 2018, advises that a plan-led and strategic approach should ensure suitable locations throughout Ireland are promoted for investment in data centres to minimise the need for deep reinforcements on the energy grid. This policy is reflected for the Region in the objectives set out on the next page[4]. The Limerick Development Plan is required to reflect regional policy and ensure that the Plan promotes investment in data centre at locations where there is feasible access to the energy grid.

The RPOs for electricity and gas network infrastructure are listed below.

Electricity

RPO 219 – New Energy Infrastructure

It is an objective to support the sustainable reinforcement and provision of new energy infrastructure by infrastructure providers (subject to appropriate environmental assessment and the planning process) to ensure the energy needs of the future population and economic expansion within designated growth areas and across the Region can be delivered in a sustainable and timely manner and that capacity is available at location and regional scale to meet future needs.

RPO 220 – Integrated Single Electricity Market (I-SEM)

It is an objective to support the Integrated Single Electricity Market (I-SEM) as a key priority for the Region and seeks the sustainable development and reinforcement of the energy grid including grid connections, trans-boundary networks into and through the Region and between all adjacent Regions subject to appropriate environmental assessment and planning process.

RPO 221 – Renewable Energy Generation and Transmission Network

a) Local Authority City and County Development Plans shall support the sustainable development of renewable enery generation and demand centres such as data centres which can be serviced with a renewable enery source (subject to appropriate environmental assessment and planning process) to spatially suitable locations to ensure efficient use of the existing transmission network;
b) The RSES support strengthened and sustainable local/community renewable energy networks, micro renewable generation, climate smart countryside projects and connections from such initiatives to the grid. The potential for sustainable local/community energy projects and micro generation to both mitigate climate change and to reduce fuel poverty is also supported;
c) The RSES support the Southern Region as a Carbon Neutral Energy Region.

RPO 222 – Electricity Infrastructure

[4] Regional Economic and Spatial Strategy for the Southern Region

It is an objective to support the development of a safe, secure and reliable supply of electricity and to support and facilitated the development of enhanced electricity networks and facilitate new transmission infrastructure projects that might be brought forward in the lifetime of this plan under EirGrid's (2017) Grid Development Strategy (subject to appropriate environmental assessment and the planning process) to service the existing and future needs of the Regional and strengthen all-island energy infrastructure and interconnection capacity.

RPO 223 – International Energy Interconnection

It is the objective to support the sustainable development of international energy interconnection infrastructure and support the sustainable development of (subject to appropriate environmental assessment and the planning process) of the Celtic Interconnector project between Ireland and France from a location in the Region.

RPO 224 – Delivery of Energy Networks

Local Authorities shall work in partnership with existing service providers to facilitate required enhancement and upgrading of existing infrastructure and networks (subject to appropriate environmental assessment and the planning process) and support the safeguarding of strategic energy corridors from encroachment by other development that could compromise the delivery of energy networks

Gas

RPO 225 – Gas Network

Subject to appropriate environmental assessment and the planning process where required, it is an objective to:

a) Promote renewable gas leading to carbon emission reduction in agriculture industry, heating and transport as well as sustainable local employment opportunities;
b) Support the transition of the gas network to a 'carbon-neutral' gas network by 2050 which will drive Ireland and the Regional to becoming a low-carbon economy.
c) Support investment in the sustainable development in the sustainable development of the agriculture bio-gas sector and regional gas supply projects which strengthen gas networks in the Region and assist integration of renewable gas to the grid network.
d) Support investment in developing renewable gas and provision of CNG refuelling infrastructure which will help reduce the Green House Gas emissions in both the agriculture and transport sectors and support Carbon Capture and Storage initiatives, which has the potential to decarbonise power generation at scale.
e) Strengthen the gas network sustainably to service settlements and employment areas in the Region, support progress in developing the infrastructures to enable strategic energy projects in the Region. An example is the Tarbert/Ballylongford land bank in Co Kerry which is a strategic development site under the Strategic Integrated Framework Plan for the Shannon Estuary and support for the extension of the Gas Network from Listowel into the Kerry Hub and Knowledge Tri-Angle settlements of Tralee, Killarney and Killorglin.

4.4.5 – Regional Waste Management Plan 2015 – 2021 for the Southern Region

Limerick City & County Council and Tipperary County Council are the lead authorities for the co-ordination of the implementation of the Southern Regional Waste Management

Plan 2015 – 2021, and Southern Regional Waste Management Office is based in Limerick. Ten local authorities are in the Southern Region. The Waste Management Plan sets key targets for the Southern Region for the prevention and management of waste. The regional waste management plans deal with non-hazardous waste and must include measures to:

- Prevent or minimise the production or harmful nature of waste
- Encourage and support the recovery of waste
- Ensure that the waste which cannot be prevented or recovered is disposed of without causing environmental pollution
- Ensure that the 'polluter pays' principle is effectively applied.

The format and content of waste management plans is governed by the Waste Management (Planning) Regulations 1997.

4.5 – Existing Capacity to accommodate growth in Limerick

4.5.1 – Water Capacity

Limerick City and Suburbs is in a positive position in relation to the capacity of the water services network to cater for future population growth. The Clareville Water Treatment Plan has the capacity to accommodate additional population growth to cater for the proposed growth of the City and Suburbs. Clareville provides potable water beyond the Suburbs to Castleconnell, Clarina, Patrickswell, and Ballyneety. There is also sufficient capacity to accommodate potential development in these settlements in terms of water supply, over the lifetime of the proposed Limerick Development Plan 2022 – 2028.

Over 60,000m³ per day of drinking water is currently produced by Limerick City and County Council at the Water Treatment Plant in Clareville. Of this production, 40,000m³ is delivered daily to the City whilst some 20,000m³ is exported daily to consumers in County Limerick and County Clare respectively.

Investment in water services infrastructure is critical to the implementation of the National Planning Framework (NFP). Sustainable Management of Water and other Environmental Resources will in part be achieved through investment in water services, under the National Development Plan 2018-2027. The current Water Services Strategic Plan by Irish Water is being updated in light of the policies in the National Planning Framework to address the requirements of future development, while also addressing environmental requirements such as obligations under the EU Water Framework Directive-mandated River Basin Management Plans. Therefore, while much of the investment to date by Irish Water has been compliance focused, it is recognised that investment for growth is now required if NPF targets are to be achieved.

Limerick has a large dispersed settlement network. There are 80 settlements outside of the City and Environs identified in the Limerick County Development Plan 2010 – 2016 (as extended) on a settlement hierarchy, there are a number of settlements in the upper tiers, which have inadequate services both from a water supply and wastewater treatment perspective. In terms of water supply, Newcastle West, Askeaton, Foynes, Rathkeale, Ballingarry, Doon, Dromcollogher, Glin, Kilfinnane, Oola, Pallaskenry and Shanagolden, have limited capacity for development, based on availability of water.

Settlements such as Kilmallock, Castleconnell, Patrickswell, Bruree, Bruff, and Cappamore, have spare capacity for water supply and the wastewater disposal capacity, which can facilitate development.

Many smaller towns and villages do not benefit of public water services networks, either in terms of water supply or wastewater treatment. While the Water Services Strategic Plan, which is prepared by Irish Water is beginning a new plan-led and collaborative investment approach, to support sustainable growth in rural towns and villages, Irish Water are developing proposals for a Small Towns and Villages Programme intended to provide water and wastewater growth capacity in smaller settlement which would not otherwise be provided for in its Investment Plan to 2024. Investment in water services is crucial to safeguard towns and villages throughout Limerick.

Climate change is also having significant effects on the availability of water sources and on the capacity of water bodies to assimilate wastewater discharges through lower water levels particularly in longer and drier summer periods, which has already impacted on water supplies in the east of the County, this will continue to be an issue, combined with the potential of flood risk.

Recent infrastructural investment in water supply in Limerick includes:

- Limerick City Water Supply Trunk Main and Valve Works consisting of the commissioning of Southern Ring Trunk Main as part of the wider Limerick City, Environs and County Area Trunk Water Mains Development Scheme, and integrating the Limerick City & Shannon Estuary Water Supply Schemes.
- Limerick City Water Conservation Project and Water Mains Rehabilitation Scheme involved the replacement of ageing water mains with historic lead pipes and corroded cast iron mains connecting to over 3,330 premises in City.
- Completion of works in Hospital to prevent cryptosporidium from entering water supply, improving security of supply, increasing flow for emergency services and reduced water leakage.

Investment is required to ensure that sustainable development can occur in the lifetime of the proposed Development Plan and into the future. Limerick City and County Council will continue to work with Irish Water to deliver services to facilitate development in Limerick.

4.5.2 – Waste Water Capacity

In terms of waste water treatment, Limerick City and Suburbs are served by the Castletroy and Bunlicky Waste Water Treatment Plants, which have existing capacity to cater for the development proposed over the lifetime of the proposed Development Plan, subject to upgrade works proposed by Irish Water. Castleconnell, Patrickswell and Clarina are served by these waste water treatment plants Waste water treatment plants serving the settlements of Askeaton, Hospital, Dromcollogher, Murroe, Foynes, and Glin are currently overloaded and operating well-above their capacity for some time. Many other settlements have limited capacity and issues in terms of meeting the requirements of the Environmental Protection Agency in terms of licencing agreements.

Many of the smaller towns and villages have inadequate or insufficient capacity and investment is required to ensure that sustainable development can occur in the lifetime of the development plan and into the future.

4.5.3 - Waste Management

The Southern Region Waste Management Office (SRWMO) coordinates the implementation of the Southern Region Waste Management Plan 2015 – 2021. A key objective of the SRWMO is to develop a prioritised programme of objectives, targets and key performance indicators to ensure that the aims of the Plan are delivered. Central to the success of the Southern Region Management Plan is the proactive promotion of the principles of prevention, minimisation, re-use and recycling of waste in accordance with the waste hierarchy, and in association with industries, businesses, other statutory and non-statutory Agencies; and to foster community awareness of waste management issues in association with the Environmental Awareness Officers in each of the member local authorities.

Figure 6 – Southern Waste Regional Waste Management Plan – Waste Hierarchy

Modern society has realised that in the interest of low-carbon economies and living, as a society we need to look beyond the current take-make-waste extractive economy (known as the linear economy), and consumption models should move to a circular economy and lifestyle. This involves a huge shift in thinking in consumer and market demands, as society and business disassemble economic activity as we know it from the consumption of finite resources, and to designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital.

To future-proof the plan it is prudent to consider policy objectives to support new innovative disruptive solutions to support circular economy principles of:

- Designing products, including their supply chains and distributions to minimise or have zero-waste and pollution.
- Keeping products in use through quality, durable, re-usable material or ease of dis-assembly to re-design into other products (made to be made again)
- Regenerate natural systems through the production process, distribution and final use.

4.5.4 – Contaminated sites and SEVESO Sites

Contaminated land is generally considered to be lands where there are substances which could cause significant harm and endanger human health. Examples of land uses that may have caused such contamination include gas works, landfill sites etc. Any redevelopment of former industrial sites must consider potential environmental impacts arising from past activities, including contaminating construction materials such as asbestos. Applications for suitable re-development of contaminated lands will generally be encouraged, the Council will require that a detailed investigation is carried out by developers demonstrating appropriate mitigation strategies can be implemented before any development may take place, and any demolition waste is disposed of safely in the interest of public health and the environment.

Limerick has a number of Seveso sites. These are sites subject to the Seveso II Directive (96/82 EC) and the EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2000 (S.I. No. 476 of 2000). This legislation seeks to prevent major accident hazards involving dangerous substances and chemicals and the limitation of their consequences for people and the environment through controls on: the location of new establishments, modifications to existing establishment, and development in the vicinity of an establishment which, by virtue of its type or location, is likely to increase the risk or consequences of a major accident. The Directive defines major accident hazard sites as those that store or can generate quantities of dangerous substances in excess of specified thresholds. Dangerous Substances are classified as:

- Toxic
- Flammable/explosive
- Dangerous for the environment

Limerick has a number of sites, some classified as Upper Tier Establishments, which include: Atlantic Fuel Supply Company Ltd. at Foynes Harbour, Foynes and Goulding Chemicals Ltd. at Morgans South, Askeaton. The Lower tier Establishments include Analog Devices International at Raheen Business Park, Raheen, Limerick, Grassland Argo at Dock Road, Limerick and Inter Terminal Shannon Ltd. at Foynes Harbour, Foynes, Co. Limerick.

The Health & Safety Authority provides advice where appropriate in respect of planning applications within a certain distance of the perimeter of these sites. Seveso Site Consultation Distances are specified in the Planning & Development Regulations, 2001 (Amended) and varies depending on the nature of activity at the site. Such technical advice will be taken into account in the consideration of applications for planning permission. The Limerick Development Plan must establish policy objectives in relation to waste management, Seveso Sites and contaminated sites.

5.0 – Conclusion

Land use planning, transportation and provision of infrastructure are interdependent and are key components for the delivery of development, they require an integrated approach to deliver sustainable development. The National Planning Framework recognises this interdependency, in so far as, it now is a requirement that lands be serviced with adequate infrastructure or serviceable within the lifetime of the Development Plan, to be suitable for zoning for development purposes.

There are large numbers of settlements in Limerick that have limited water services infrastructure. Many settlements have no existing water or waste water treatment capacity and this will prove significantly challenging in the preparation of the proposed Development Plan, to comply with the requirements of the National Planning Framework.

In addition Limerick City and its town and village centres have experienced significant challenges to retain vibrancy and vitality, in recent times, which has been further compounded by Covid 19, over the past few months. The challenges facing these centres are evident in the number of vacant units in our city, towns and villages. It is a policy of the National Planning Framework to target the reversal of decline in the core of our City, town and village centres. Limerick City and County Council have been progressive in this area, working with vacant and derelict sites throughout Limerick, through targeted measures that address vacant premises and deliver appropriate reuse and regeneration of derelict and vacant units. The Local Authority have recently been successful in sourcing funding under the Rural Regeneration and Development Fund to address the issues of vacancy and dereliction throughout Limerick and will continue to engage to revive our the centres of our City, towns and villages.

The proposed Development Plan has an important role in delivering quality places through place making, for example ensuring new developments are designed with good connectivity and permeability for all. The creation of urban environments that offer good quality of life is important in allowing investors to attract and retain the talent. Place making offers the opportunity to make a difference for the residents of our city, towns and villages, making them more desirable places to live, work and visit.