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Infrastructure



7.1 Introduction

This chapter seeks to advance the Strategic Vision of the Draft Plan established in Chapter 1: Introduction, as informed by the NPF and RSES, through the provision of the necessary infrastructure. The Draft Plan recognises the potential of Limerick in terms of sustainable economic prosperity, improving quality of life and well-being for Limerick's citizens. However, Limerick's infrastructure must keep pace with modern demands. In this regard, the provision of high quality infrastructure, energy networks and environmental services is fundamental to ensuring the long-term physical, environmental, social and economic prosperity for Limerick City and County.

The location of future development, including the zoning of land and the associated objectives of the Draft Plan and the Council's assessment of planning applications, is informed by the capacity and availability of infrastructure. The Planning Authority will require the timely provision of infrastructure for the sustainable development of all lands.

Policy IN P1

Strategic Infrastructure

It is a policy of the Council to:

- a) Secure investment in the necessary infrastructure (including digital technology, ICT, telecommunications networks, water services, surface water management, waste management, energy networks), which will allow Limerick to grow and realise its full potential.
- b) Fulfil Limerick's ambition as a contemporary City and County in which to live, work, invest and visit, with supporting infrastructure, whilst complying with the relevant EU Directives and national legislation, including the protection of the environment.

7.2 National and Regional Policy Context

7.2.1 National Planning Framework

The National Planning Framework has identified Limerick for significant additional growth by 2040. This additional population will have a significant demand on existing and proposed infrastructure and will require the coordination of growth and place-making with investment in world-class infrastructure. This will include telecommunications infrastructure, water services, energy networks and waste management infrastructure. Alongside the NPF there are a number of European and National Strategic Plans, directives and guidelines that will inform the provision and development of these infrastructure networks, across the City and County over the lifetime of the Draft Plan. These include:

- *Department of Communications, Energy and Natural Resources (2012) Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure A New Circular Economy Action Plan for a Cleaner More Competitive Europe 2020;*
- *Department of Communications, Energy and Natural Resources (2015) White Paper on Energy;*
- *Department of Communications, Energy and Natural Resources (2019) Climate Action Plan;*
- *Department of Environment, Climate and Communications National Policy Framework: Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030;*
- *Department of Housing, Planning and Local Government (2019) Draft National Marine Planning Framework;*
- *Directive on the disposal of polychlorinated biphenyls and polychlorinated terphenyls known as the PCB/PCT Directive (96/59/EC);*
- *Directive on the incineration of waste (Directive 2000/76/EC);*
- *Draft Water Services Guidelines for Planning Authorities DHPLG 2018;*
- *Eirgrid Grid Development Strategy – Your Grid, Your Tomorrow (2017);*

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- *Electrical and Electronic Waste (WEEE) Directive (2012/19/EU);*
- *End-of-Life Vehicles Directive (Directive 2000/53/EC);*
- *EPA Code of Practice for Domestic Waste Water Treatment Systems 2021;*
- *EPA National Hazardous Waste Management Plan 2014-2020;*
- *EPA Waste Management (Certification of Historic Waste Disposal and Recovery Activity) Regulations 2008;*
- *EPA Wastewater Treatment Manual (Treatment Systems for Small Communities, Business, Leisure Centres and Hotels);*
- *EU Action Plan for the Circular Economy – Closing the Loop 2015;*
- *Integrated Pollution Prevention and Control Directive (1996/61/EC);*
- *Ireland’s Transition to a Low Carbon Energy Future 2015-2030;*
- *Irish Waters Capital Investment Plan 2020-2024;*
- *Landfill Directive (1999/31/EC);*
- *National Hazardous Waste Plan (NHWMP) 2014-2020;*
- *National River Basin Management Plan for Ireland 2018-2021(DHPLG);*
- *National Wastewater Sludge Management Plan;*
- *National Water Resources Plan;*
- *Nitrates Directive, Good Agricultural Practise for the Protection of Waters;*
- *Packaging Waste Directive (Directive 94/62/EC);*
- *Realising Our Rural Potential – Action Plan for Rural Development, 2017;*
- *Resource Opportunity – Waste Management Policy (DECLG) 2012;*
- *Sewage Sludge Directive (86/278/EEC);*
- *The National Broadband Plan;*
- *The National Digital Strategy 2018-2027;*
- *Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020-2025 (DECC) 2020;*
- *Waste Framework Directive (2008/98/EC).*

7.2.2 Regional Spatial and Economic Strategy

The Regional Planning Objectives (RPOs) of the Regional Spatial and Economic Strategy (RSES) for the Southern Region supports the growth of Limerick, in line with existing and proposed capacity within the infrastructural networks. Through the RPOs, support is given to develop Limerick as a Smart City, incorporating smart infrastructures, to act as an engine for a Smart Region - both urban and rural. It also seeks investment in broadband, fibre technologies, wireless networks and integrated digital infrastructures. Recognition of the importance of the implementation of Irish Water’s *Investment Plan* and the alignment of the supply of water services with the settlement strategy of the Draft Plan, is clearly set out and supported. The RSES also seeks the targeting of measures for the prevention and management of waste and policy support is provided for the objectives of the *Southern Regional Waste Management Plan*. The significance of protecting and developing the energy grid across the region is also identified as critical to meeting infrastructural demands over the lifetime of the Draft Plan.

7.2.3 Limerick’s Digital Strategy - Building Ireland’s First Digital City – Smart Limerick

Building Ireland’s First Digital City – Smart Limerick Roadmap 2017 – 2020 aims to ensure that Limerick can better respond to economic, social and environmental needs, through the use of innovative smart technology. 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.

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7.3 Climate Action in Infrastructure Planning

The provision of high quality infrastructure has been identified as fundamental to ensuring the long-term physical, environmental, social and economic prosperity of Limerick. Climate Action has to form a key consideration in the development of any such infrastructure for Limerick City and County. To this end, the Council will apply the following objectives when considering future development proposals concerning infrastructure:

Objective IN O1 Climate Action in Infrastructure Planning

It is an objective of the Council to:

- a) Require all infrastructure development, whether above ground or subterranean, to avoid flood risk areas and areas at risk of coastal erosion.
- b) Require site selection, location, design and materials to have regard to and be resilient to the changing climate (high winds, temperature fluctuations, increased storm intensity and changes in rainfall).
- c) Collaborate with utility and service providers to ensure their networks are resilient to the impacts of climate change, both in terms of design and ongoing maintenance.

7.4 Digital Connectivity and Limerick's Digital Strategy

Limerick City and County Council is aware of the need for high quality digital and mobile information communication systems. Digital infrastructure supports the regeneration of urban centres and the diversification of the rural economy, thereby, sustaining urban and rural communities. Advancements in information and communication technologies (ICT) continually evolve and access to quality digital systems is a prerequisite for successful e-commerce, remote working opportunities, distance education, lifelong learning opportunities, digital health services and other opportunities, including cultural experiences offered through digital means and engagement.

Limerick has been to the forefront in terms of digitalisation initiatives by a Local Authority, having published the first Local Authority digital strategy - *Building Ireland's First Digital City - Smart Limerick Roadmap* in 2017. A new Digital Strategy will be prepared in 2021. The First Digital Strategy sets out Limerick's ambition to respond efficiently to economic, social and environmental issues, using innovative smart technology. Smart cities respond to challenges such as climate change, population growth, political or economic instability, by engaging with society, applying collaborative leadership methods, working across disciplines and city systems and using data information and modern technologies. Part of Limerick City Centre is designated a Digital District - a smart city digital test bed, located in the Georgian Innovation District. Features of the Quarter include smart living spaces, smart offices and smart transport.

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The strategy supports both national and EU digital programs and the rollout of the *National Broadband Plan*. As part of the Strategy, Smart Homes and Smart Buildings will have high-speed connections to the internet, while sensors and data will be used for a better, more sustainable use of energy and improved use of clean, renewable energy and more sustainable forms of movement. Examples of initiatives under the strategy include Smart Parking, Smart Transport Patterns for Rural Transport, Open Data for Autonomous Vehicles and the Municipal Data Network. Collecting real-time data by Internet of Things (IoT) technologies, including over 100 air, noise, water and soil quality sensors will also take place throughout the City and County, with footfall counters in the City Centre and Smart CCTV in the settlements. These datasets will be used to foster innovation and support start-up ecosystems such as the Georgian Innovation District.

Key digital growth enablers for Limerick and for the Limerick Shannon Metropolitan Area were identified by the RSES as necessary for the future sustainable development of the Southern Region. The objectives of the Draft Plan in relation to digital connectivity will advance the vision of the RSES for the Southern Region and the role of Limerick therein.

Objective IN O2

Digital Connectivity

It is an objective of the Council to:

- a) Develop Limerick's digital infrastructure, as guided by the settlement strategy as engines for a Smart City and County and drivers of a wider Smart Region including the Limerick Shannon Metropolitan Area, the Limerick Digital District and to progress Limerick's ambition to be Ireland's first Digital City.
- b) Seek opportunities under the All Ireland Smart Cities Forum including funding and partnership opportunities with stakeholders, to implement the programmes of the *Limerick Digital Strategy* and EU Digital Single Market.
- c) Encourage the use of good practices, nationally and internationally, through living labs, test beds, innovative research, disruptive technologies and collaborations with other agencies, including third level institutions and the private sector.
- d) Capitalise on opportunities in partnership with other agencies to deploy innovative, disruptive technologies and smart infrastructure across Limerick City and County, including more peripheral locations to eliminate any disparities on digital connection and reliability of service.
- e) Explore opportunities to ensure all communities can transition to digitalisation for a better quality of life and eliminate digital inequalities, in terms of access to digital networks for the purposes of business, access to public services including education and contemporary cultural and entertainment experiences.
- f) Support the development of Smart Homes and Smart Buildings and facilitate the Smart Limerick concept in accordance with the *Limerick Digital Strategy 2017 - 2020* and any subsequent plans.
- g) Support investment in incubation and ICT infrastructure to capitalise on remote working opportunities, enterprise start-ups, e-commerce and up-scaling for businesses across all settlements in the County.

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7.4.1 Broadband

High speed, cost-competitive and reliable broadband underpins economic development and contributes to a good quality of life for Limerick's communities. The absence of such infrastructure makes it significantly more difficult to retain employment, attract new jobs and limits educational and entrepreneurial opportunities. High-speed, readily available and consistent broadband is crucial for Foreign Direct Investment, indigenous entrepreneurial opportunities and provides better access to global markets, as a means to address the impacts of Brexit and other global events such as the Covid-19 Pandemic.

The implementation of high-speed broadband connectivity falls within the remit of the Department of Communications, Energy and Natural Resources. In 2012, the Department published *Delivering a Connected Society – A National Broadband Plan for Ireland (NBP)*, to guide the rollout of broadband across Ireland. This national policy document establishes the Government's ambition to deliver high speed, reliable and cost-effective broadband services, via fibre optic based networks, to all premises in the Country. This policy aims to eliminate disparities between rural and urban areas in terms of access to high-speed broadband. Broadband infrastructure is provided by private investment and State intervention, in areas where private companies have no plans to invest, as it is not economically viable for them to do so. This approach guarantees that rural communities have the same digital opportunities as urban communities.

In Limerick, fourteen public locations in rural communities will benefit from the Broadband Connection Points (BCPs) scheme under the *National Broadband Plan (NBP)*. These locations will receive early (150Mb) high-speed broadband connectivity and public Wi-Fi, through the roll out of the *National Broadband Plan*.

Newcastle West, as the Key Town in the County, has been identified in the RSES (RPO 22) as requiring support for investment in incubation and ICT infrastructure, to capitalise on remote working opportunities, enterprise start-ups and up-scaling for businesses.

The Council will require that open access is available to all ducting networks provided within the Plan area, to facilitate competitive telecommunications services and to safeguard roads and footpaths from excavation retrospectively in new developments. The networks will remain in the ownership of the developer until taken in charge by the Council. Thereafter, the service provider will be responsible for the telecommunications infrastructure.

Objective IN O3 Broadband

It is an objective of the Council to:

- a) Support the delivery and implementation of the *National Broadband Plan* and any subsequent plans.
- b) Encourage the provision of WiFi zones in public buildings and advance Limerick's participation in the WiFi4EU programme (a European-wide initiative promoting free access to WiFi connectivity for citizens in public spaces) and facilitate a network of 40-50 free public WiFi access points (APs) in Limerick City.
- c) Require carrier neutral, open access, multi-duct infrastructure serving new residential, commercial/business units, community hubs/centres, communal residential services and other appropriate new development (e.g. rail and road development), to be incorporated into the design and layout of new developments in Limerick.
- d) New development (commercial, community, leisure) or housing development exceeding four units will be required to demonstrate, in a written statement, how fibre-enabled internet is made available to users when assessing planning applications.

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- e) Require ducting for broadband fibre connections shall be provided underground during the installation of services and during the carrying out of any work to roads or rail lines.
- f) Ensure broadband installation shall comply with the *Guidelines for NBI End Users when laying ducting to facilitate the installation of Fibre Networks on Private Property* and the requirements of the *National Broadband Plan 2020* and any subsequent plans.

7.4.2 Telecommunications Support Structures, Antennae and Domestic Satellite Dishes

The Council recognises the importance of high quality telecommunication infrastructure as a prerequisite for a modern society and economy. While the advantages of a high quality ICT infrastructure is acknowledged, these must be balanced with the need to safeguard both the urban and rural landscape, which can be significantly impacted due to the physical nature of telecommunication structures. Visual impact should be kept to a minimum, with detailed consideration of design, siting and the scope for utilising landscaping measures effectively. In considering planning applications, regard shall be had to *Telecommunications Antennae and Support Structures, Guidelines for Planning Authorities*, DECLG, 1996, Circular Letter P107/12 and the Planning and Development Regulations 2001 (as amended). These guidelines and regulations encourage the sharing or clustering of sites, as reflected in this chapter.

Domestic satellite dishes can materially damage historic buildings, or deplete historic townscapes, particularly if there is a proliferation of dishes in an area, on a building or on the street frontage. While satellite dishes do not require planning permission, subject to specified conditions under the Planning and Development Regulations 2001 (as amended), these exemptions are not applicable where the building is a Protected Structure, or located in an Architectural Conservation Area (ACA), of which there are a number designated in Limerick. There is a presumption against erecting satellite dishes where they would materially affect the character and appearance of a Protected Structure, an Architectural Conservation Area (ACA), or in any other area where they could cause unacceptable affects to visual amenity.

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Objective IN O4**Telecommunication Support**

It is an objective of the Council to:

- a) Promote shared telecommunications infrastructure in all new developments to facilitate multiple network providers. Shared infrastructure should be made available to all broadband service providers on a non-exclusive basis to both suppliers and users of the new infrastructure.
- b) Work closely with the telecommunications industry during the development and deployment phase of telecommunications infrastructure to carefully manage Limerick's road networks and minimise future road infrastructure works.
- c) Require co-location of antennae support structures and sites where feasible. Operators shall be required to submit documentary evidence as to the non-feasibility of this option in planning applications for new structures.
- d) Facilitate the public and private sector in making available where feasible and suitable, strategically located structures or sites, including those in the ownership of Limerick City and County Council, to facilitate improved telecommunications coverage if the need is sufficiently demonstrated.
- e) Require best practice in both siting and design in relation to the erection of communication antennae and support infrastructure, in the interests of visual amenity and the protection of sensitive landscapes. There is a presumption against the location of antennae support structures where they would have a serious negative impact on the visual amenity of sensitive sites and locations.
- f) Require the de-commissioning of a telecommunications structure and its removal off-site at the operator's expense when it is no longer required.
- g) Apply a presumption against erecting satellite dishes where they would materially affect the character and appearance of a Protected Structure, an Architectural Conservation Area (ACA) or in any other area where they could cause unacceptable affects on visual amenity.
- h) Ensure the orderly development of telecommunications throughout the County in accordance with the requirements of the *Telecommunications Antennae and Support Structures, Guidelines for Planning Authorities*, DECLG, 1996, except where they conflict with Circular Letter PLO7/12 as takes precedence and any subsequent guidelines.

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7.5 Water Services and Surface Water

For the purposes of the Draft Plan, water services infrastructure refers to the provision of a potable water supply and the disposal of wastewater. The quality and extent of water services are a determinant of quality of life and a precursor to a strong economy/business environment. These services are identified by the RSES¹ as a priority for infrastructural investment as part of a holistic approach to delivering infrastructure across the Southern Region (RPO 109).

As guided by the RSES, water services is one element of the selection criteria for planning to accommodate future population growth and strategic employment growth at metropolitan, regional and local levels in Limerick. In the Draft Plan, water services is a key consideration in the settlement hierarchy and is pertinent to the zoning of lands across the city and the settlements across the County. Water infrastructure is a Strategic Investment Priority (SIP) of the NDP 2018 – 2027 and is aligned to implement the NPF over 10 years to provide for the anticipated population growth of the State, including Limerick City and County.

One of the National Strategic Outcomes (NSO) of the NPF is the Sustainable Management of Water and Other Environmental Resources. The NPF sees this as critical to our environment and well-being. Conserving and enhancing these resources is important for future planning, including national water planning, regional wastewater management, river basement and flood risk management. Collaborating with national, regional and local bodies is crucial according to the NPF, to ensure water and environmental resources are managed properly for the future and the circular approach be applied to consumption and disposal of water. The objectives of Limerick's Draft Plan must reflect the Government spatial planning policy and its investment priorities.

At a European level, 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.

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

Access to a good quality uninterrupted water supply and wastewater disposal system is essential for public health. Irish Water are responsible for providing a safe and reliable supply of drinking water and for the collection and treatment of wastewater to their customers.

¹ Regional Spatial and Economic Strategy for Southern Region, Southern Regional Assembly 2019, page 111

7.5.1 Water Services Act 2013

The Water Services Act 2013 established Irish Water (IW) as Ireland's national water utility body and transferred responsibilities for public water services, delivery and operation from Local Authorities to Irish Water in January 2014. Limerick City and County Council currently acts as an agent to deliver water supply and wastewater treatment operations and provide support for Irish Water's *Capital Investment Programme* in Limerick. In addition, the Council maintains and monitors a register of Group Water Schemes in the County and administer the following grant assistance programmes on behalf of the Department of Housing, Planning and Local Government:

- i) Group Water and Wastewater Schemes through the Rural Water Multi Annual Programme and the Operational Funding Programme;
- ii) Private Well Grants;
- iii) Septic Tanks Grants;
- iv) Lead Replacement Grants.

Irish Water is responsible for the operation of public water services including management of national water assets, maintenance of the water and wastewater system, investment and planning, managing capital projects together with customer care and billing. IW is responsible for all capital investment decisions and the implementation of the capital investment programme.

The Environmental Protection Agency (EPA) is the national environmental regulator with responsibility for supervising the supply of drinking water by Irish Water and the authorisation of discharges from Irish Water's wastewater treatment plants.

The Commission for Energy Regulation (CER) is the economic regulator of public water services. The CER's role is to protect the interests of water consumers, ensure water services are delivered in a safe, secure and sustainable manner and that Irish Water operates in an economic and efficient manner.

Objective IN O5 Water Services

It is an objective of the Council to:

- a) Support Irish Water in the provision of water and wastewater infrastructure and services in accordance with the Service Level Agreement, until such time as the Agreement is terminated.
- b) Collaborate with Irish Water in the protection of water supply sources.
- c) Liaise with Irish Water during the lifetime of the Draft Plan to secure investment in the provision, extension and upgrading of the piped water distribution network and wastewater pipe network across Limerick City and County, to serve existing population and future population growth and sustain economic growth, in accordance with the requirements of the Core and Settlement Strategies.
- d) Collaborate with Irish Water to resolve the existing water services infrastructural constraints in Newcastle West – a Key Town designated by the RSES.
- e) Ensure that development proposals comply with the standards and requirements of the *Irish Water: Code of Practice for Water Infrastructure* (December 2016) and any updated version of this document during the lifetime of the Draft Plan or the *EPA Code of Practice for Domestic Waste Water Treatment Systems 2021*.
- f) Require future developments to connect to public water services and wastewater if available to the site. Combined water and wastewater systems will not be permitted. Consent to connect to Irish Water assets will be requested as part of the planning application process.
- g) Have regard to Section 28 Guidelines – *Draft Water Services Guidelines for Planning Authorities*, DHPLG, 2018 and any subsequent guidelines when carrying out the forward planning and development management functions of the Planning Authority.

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Objective IN O6**Public Water Supply**

It is an objective of the Council to:

- a) Promote and support water conservation and demand management measures among all water users in new developments.
- b) Restrict development within the zones of contribution for wells used as sources of water supply, except where established by Irish Water and to the Council's satisfaction, that the development would not compromise the quality, quantity or pressure of the public supply extracting from the well.

7.5.2 Group Water Schemes and Private Water Supplies/Wells

Private wells have the potential to be compromised by contamination from wastewater treatments systems/septic tanks, soakpits, agricultural land spreading, fuel storage, fertiliser storage or run-off due to extreme weather events. Private wells are not regulated under the European Communities (Drinking Water) Regulations 2014 and Irish Water has no regulatory function in this regard. Recommended separation distances between on-site wastewater treatment systems (specifically the percolation area or polishing filter) and wells or boreholes are contained in the *EPA's Code of Practice for Domestic Waste Water Treatment Systems 2021*. A private well should be sufficiently constructed and sealed to prevent contamination. The Rural Water Programme facilitates the development of water services in the rural areas, to improve deficiencies in group water schemes and private supplies, where no public water scheme is available. Investment under the programme is prioritised to deliver measures such as upgrades identified in the *National River Basin Management Plan*, satisfying the Water Framework Directive and to meet the requirements of the Drinking Water Directive. Grants are available under the Rural Water Programme for the carrying out of improvement works to a private water supply (a water supply providing water intended for human consumption

and domestic purposes that serves only one house). The relevant Regulations are Housing (Private Water Supply Financial Assistance) Regulations 2020 (SI No. 192 of 2020).

Objective IN O7**Private Water Supply**

It is an objective of the Council to require that in locations where a connection to an existing public water supply is not possible, or the existing supply system does not have sufficient capacity, the provision of a private water supply may be considered. The development must demonstrate that the proposed water supply meets the standards set out in EU and national legislation and guidance, would not be prejudicial to public health, or would not affect the source of an existing supply, particularly a public supply/well. Such information will be required as part of the planning application process.

7.5.3 Public Waste Water Treatment

According to the 2016 Census, 61% of private households in Limerick City and County are connected directly to the public sewerage network, which is below the State average of 65.9%.

Further analysis by the Council has identified the following:

- 7.3% of settlements in Limerick have adequate wastewater capacity to facilitate future growth;
- Three settlements that have limited wastewater capacity for future growth and currently do not comply with the Waste Water Discharge Licence granted by the EPA are Adare, Caherconlish and Kilfinane;
- 20% of settlements have no spare wastewater capacity, including Newcastle West, Askeaton and Foynes;
- There is chronic overloading of the Waste Water Treatment Plants (WWTP) in Askeaton, Hospital, Dromcollogher and Murroe.

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Irish Water's current wastewater treatment capacity register for County Limerick, states that there is capacity available in 41 no. of the 53 no. waste water treatment plants (WWTPs). These include Bunlicky and Castletroy WWTPs, which serve the Limerick City Metropolitan Municipal District. These WWTPs require some upgrading and it is envisaged by Irish Water that there will be sufficient spare capacity to accommodate the projected growth, as set out in the RSES and the Core Strategy, over the lifetime of the Draft Plan. It is noted that currently there is no spare WWTP capacity available in the Key Town of Newcastle West. However, the upgrade of the plant to provide capacity is included in Irish Water's 2020- 2024 *Investment Plan*.

WWTP upgrades are also planned for Abbeyfeale, Adare and Dromcollogher. Other capital investment projects by Irish Water are ongoing to provide WWTPs in the previously untreated agglomerations of Foynes and Glin. Minor WWTP upgrades and improvements are also continually carried out on a nationally prioritised basis through Irish Water's programmes. Further upgrade(s) may also be progressed under the *Small Towns and Villages Growth Programme*, intended to provide capacity in Irish Water's treatment plants in smaller settlements, which would not otherwise be provided for in the current Investment Plan.

Irish Water is preparing a *Drainage Area Plan* (DAP) to be completed in 2024 for the Limerick City and Castletroy agglomerations. Limerick City and County Council will collaborate with Irish Water to ensure planned growth in the strategic growth areas and elsewhere in the city is taken account of in this study.

Wastewater Network Development Plans are currently being prepared by IW for the Limerick Metropolitan Area and Newcastle West. As part of the Mungret Local Infrastructure Housing Activation Fund project (LIHAF), Irish Water is working with the Council to provide wastewater network infrastructure in the Mungret area.

Objective IN O8

Public Waste Water

It is an objective of the Council to:

- a) Ensure adequate and appropriate wastewater infrastructure is available to cater for existing and proposed development, in collaboration with Irish Water, to avoid any deterioration in the quality of receiving waters and to ensure that discharge meets the requirements of the Water Framework Directive.
- b) Require all new developments to connect to public wastewater infrastructure, where available and to encourage existing developments that are in close proximity to a public sewer to connect to that sewer. These will be subject to a connection agreement with Irish Water and evidence of this agreement will be required as part of any planning application.
- c) Require all new development to provide separate foul and surface water drainage systems, to maximise the capacity of existing collection systems for foul water.
- d) Apply a presumption against any development that requires the provision of private wastewater treatment facilities (i.e. Developer Provided Infrastructure) other than single house systems and in very exceptional circumstances.

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7.5.4 Private Waste Water Treatment Systems, Domestic Wastewater Treatment Systems (DWWTS) including Septic Tanks

According to the 2016 Census, 30.8% of private households rely on septic tank systems to dispose of their wastewater in Limerick. Limerick City and County Council is the designated Water Authority for the assessment and approval of individual private domestic on-site wastewater treatment systems in Limerick. The main method of sewage disposal in rural areas is by means of individual septic tanks and proprietary wastewater treatment systems. The requirements for these systems are set out in the *EPA Code of Practice for Domestic Waste Water Treatment Systems 2021*. All planning applications for rural dwellings on un-serviced sites are required to demonstrate compliance with the Code of Practice. For larger developments, the requirements are contained in the *EPA Wastewater Treatment Manual – Treatment Systems for Small Communities, Business, Leisure Centres and Hotels* (1999) and *EPA Guidance on the Authorisation of Discharges to Groundwater* (EPA 2011).

The provision of temporary wastewater treatment facilities for new developments will only be considered where a permanent solution has already been identified and committed to by Irish Water, but has not yet been implemented. The provision of such temporary facilities will only be considered in very limited circumstances, where the solution is environmentally sustainable and would not affect the quality status of receiving waters. Adequate provision will be made by the developer for the operation and maintenance of the temporary facility for the duration of its required existence and thereafter for its decommissioning and removal from site.

Objective IN O9

Private Waste Water Treatment

It is an objective of the Council to:

- a) Promote the changeover from septic tanks to the public foul water collection networks where feasible and to strongly discourage the provision of individual septic tanks and domestic wastewater treatment systems, in order to minimise the risk of groundwater pollution.
- b) Ensure single house wastewater treatment systems in those areas not served by a public foul sewerage system to comply with the *EPA Code of Practice for Domestic Waste Water Treatment Systems 2021* as may be amended or updated.
- c) Require non-domestic wastewater treatment systems in those areas not served by a public foul sewerage system with to demonstrate full compliance with *EPA Wastewater Treatment Manuals (Treatment Systems for Small Communities, Business, Leisure Centres and Hotels)* as maybe amended or undated.
- d) Ensure all private wastewater treatment systems shall be located entirely within the site boundary. Under no circumstances shall single domestic treatments units or septic tanks be shared between dwellings.
- e) Ensure that private wastewater treatment facilities, where permitted, are operated in compliance with their wastewater discharge license, in order to protect water quality.

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7.5.5 Storm Water and Surface Water

Sustainable management of water, waste and other environmental resources is supported in both National Strategic Outcome 9 of the NPF and the RSES. National Policy Objectives 5 of the NPF also advocates enhanced water quality and resource management, by way of flood risk management, consideration of *River Basin Management Plan* objectives and use of Sustainable Urban Drainage Systems (SuDS) (Further information on definition of SuDS below). Storm water flows can have a significant detrimental impact on the available capacity of combined sewer networks and at treatment plants. Inadequate treatment of surface waters from carparks and hardstands can result in pollution of the receiving watercourses.

There are many approaches to management of surface water that take account of water quantity (flooding), water quality (pollution), biodiversity (wildlife and plants) and amenity and these are collectively referred to as Sustainable Urban Drainage Systems (SuDS). The use of SuDS to address surface water and its diversion from combined sewers is encouraged, in particular in infill/brownfield sites and higher density areas as appropriate. Green roofs are recognised as a mechanism to attenuate storm water run-off from sites. They are made up of layers of vegetation, which create areas for growth and water storage and reduces the amount of surface water running off a roof. Limerick City and County Council will require proposals in excess of 300sqm to incorporate green roofs into their surface water management systems.

Development will only be permitted where the Council is satisfied that suitable measures have been proposed that mitigate the impact of drainage, through the achievement of control of run-off quantity and quality, while enhancing amenity and habitat. In particular, the requirements of the *SuDS Manual* by the UK's Construction Industry Research and Information Association (CIRIA) shall be followed unless specifically exempted by the Council (see also Section 11.3.11 SuDS).

Any site-specific solutions to surface water drainage systems shall meet the requirements of the Water Framework Directive and the *River Basin Management Plan 2018 – 2021 and Water Quality in Ireland 2013 - 2018 (2019)*, or any updated version of these documents.

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Objective IN O10**Surface Water and SuDS**

It is an objective of the Council to:

- a) Ensure the separation of foul and surface water discharges in new developments through the provision of separate networks within application site boundaries.
- b) Work in conjunction with other public bodies towards a sustainable programme of improvement for riverbanks, back drains, etc.
- c) Maintain, improve and enhance the environmental and ecological quality of surface waters and groundwater, including reducing the discharges of pollutants or contaminants to waters, in accordance with the *National River Basin Management Plan for Ireland 2018-2021* (DHPLG) and the associated Programme of Measures and any subsequent *River Basin Management Plan*.
- d) Ensure adequate storm water infrastructure to accommodate the planned levels of growth within the Plan area and to ensure that appropriate flood management measures are implemented to protect property and infrastructure.
- e) Cater for the future developments through public and private driven initiatives where discharge capacity permits.
- f) Address the issue of disposal of surface water generated by existing development in the area, through improvements to surface water infrastructure, including for example attenuation ponds, the application of sustainable urban drainage techniques, or by minimising the amount of hard surfaced areas, or providing porous surfaces as the opportunity arises.
- g) Protect the surface water resources of the Plan area and in individual planning applications request the provision of sediment and grease traps and pollution control measures where deemed necessary.
- h) Require all planning applications to include surface-water design calculations to establish the suitability of drainage between the site and the outfall point and require all new developments to include SuDS, to control surface water outfall and protect water quality in accordance with the requirements of Chapter 11: Development Management Standards of the Draft Plan.
- i) Promote SuDS and grey water recycling in developments and responsible use of water by the wider community, to reduce the demand for water supply.
- j) Require SuDS schemes to be designed to incorporate the four pillars of water quality, water quantity, biodiversity and amenity to the greatest extent possible within the constraints of a given site.
- k) Allow sufficient land take for SuDS when planning the site and consider the region as a whole, in association with adjoining lands and their requirements in designing SuDS. Developers may be required to set aside lands to cater for not only their own SuDS but also regional SuDS.
- l) Promote the provision of suitable Blue/Green Infrastructure (BGI) and Nature Based Solutions to the surface water disposal in new development, as a means to provide urban flood resilience. This approach capitalises on the potential of urban green spaces and natural water flows, subject to the other planning considerations such as amenity, maintenance, traffic safety, proper planning and sustainable development and environmental requirements.

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7.6 Energy Networks – Resource efficiency, Electricity and Gas Networks

Energy supply depends on the demand for energy services (heating, transportation and electricity) and is driven primarily by economic activity and population growth. The two main energy sources currently serving Ireland are electricity and gas, generated by processing fossil fuels (oil, gas and coal) and increasingly renewable sources such as wind, hydro- electricity, biomass and solar energy. The current energy network licence holders in Ireland are ESB Networks (electricity distribution network operator and owner), EirGrid (electricity transmission network operator) and Gas Networks Ireland (gas network owner and operator). As Ireland transitions to a low carbon society, significant investment and research is being directed towards innovative renewable energy sources, such as bio-energies generated through anaerobic digestion, solar power and the potential of tidal energy and wind energy (refer to Chapter 8: Climate Action, Flood Risk & Transition to Low Carbon Economy).

EirGrid and Gas Networks

Ireland produce Network Development Plans, Generation Capacity Statements and All-Island Transmission Forecast Statements, to progress the development of the networks to cater for the energy demands of a growing population and economic development, whilst transitioning to a low carbon society. The Draft Plan supports the future development of energy networks through objectives that protect existing infrastructure, but also facilitates future developments or upgrades, to provide the necessary power for population growth and a progressive strong economy.

The RSES highlights the importance of reducing energy consumption from fossil fuel sources and promotes the use of more sustainable sources such as wind, wave, solar and biomass to generate energy. The use of smart technology systems and the recognition that buildings can act as both generators and consumers of energy and the promotion of electric vehicles, will all place greater pressure on the national electricity grid. Thus, the strengthening of the national grid is important for a number of reasons, including improving security of supply for the domestic, residential and enterprise market, adapting the infrastructure and network to transition to the smart, low carbon systems and to attract high-end enterprise, which often require significant energy capacity and reliability.

The Council is also informed by the NPF and the objectives of the RSES in terms of the development of resilient, adaptive energy networks, which will provide the necessary infrastructure for a progressive Limerick.

The Council will be guided by national policy requirements and guidelines under planning and environmental legislation when assessing planning applications.

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Objective IN O11**Energy and Gas Network**

It is an objective of the Council to:

- a) Support the sustainable reinforcement and provision of new energy infrastructure by infrastructure providers (subject to appropriate environmental assessment and the planning process), ensuring the energy needs of future population and economic expansion across Limerick and the wider Southern Region can be delivered in a sustainable and timely manner.
- b) Protect existing infrastructure and strategic route corridors for energy networks from encroachment by development that might compromise the performance of the networks.
- c) Require energy transmission infrastructure to comply with best practice with regard to siting, design and least environmental impact, in the interest of landscape protection.
- d) Require that, in all new developments, multiple services are accommodated in shared strips underground and that access covers are shared, whenever possible. The location of services shall be subterranean, where appropriate. Where existing and proposed high voltage lines traverse new residential, commercial or civic developments, these should be relocated underground where technically feasible. The Council will require written consent to this relocation as part of the planning application process.
- e) Support the transition of the gas network to a carbon neutral network by 2050, thereby supporting Limerick to become carbon neutral.
- f) Support Community Energy Companies to create positive energy districts.

7.6.1 Energy Interconnection

Ireland's energy import dependence has grown since 1995 according to the SEAI, with energy import dependency at 67% in 2018. Consequently, Ireland is one of the most import dependent countries in the EU². To ensure the security, stability and reliability of the energy supply, Ireland's energy networks are currently connected to the British systems (which in turn imports from wider European systems) via interconnectors. The Celtic Interconnector is currently progressing as a sub-sea link for energy with mainland Europe off the south coast of Ireland. Given the context of Brexit, building the resilience of Ireland's energy networks is pertinent as a means to reduce Ireland's import dependency.

Objective IN O12**Energy Interconnection**

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

² Energy Security in Ireland Report 2020, SEAI, page 3

7.6.2 Electricity

EirGrid is responsible for the safe, secure and reliable transmission of electricity through operating the electricity transmission grid. It also is responsible for interconnections to import electricity. Transmission networks comprise the high voltage and high-pressure power lines traversing the country, transmitting electricity to stations where electricity is processed to lower voltages, suitable for transmission by ESB Networks along the local distribution network to premises. The National Grid is a term that refers to the high voltage transmission network and local distribution network, transmitting electricity in unison across the State. Eirgrid sets out its vision to deliver safe, secure and reliable supply of electricity for Ireland's future needs in *Grid Development Strategy - Your Grid, Your Tomorrow* (2017) (ENCL1). This document informs the objectives of the Draft Plan to sustain a high quality energy network. EirGrid has a number of important projects in Limerick identified in the *Transmission Development Plan 2020 - 2029*, including the following:

- Ballinknockane 110 kV New Station - Solar farm connection;
- Athea 110 kV Station - Wind farm connection; and
- Killonan 220/110 kV Station Redevelopment.

The driver for these projects is the integration of renewable energy with the necessary infrastructure to connect new energy generators, such as wind and solar farms to the network, thereby sustaining security of supply. The Killonan station forms the main bulk supply point for the Mid-West Region and is an important node on the network for Limerick City and its region.

Objective IN O13 Electricity Grid Development

It is an objective of the Council to support the Eirgrid *Grid Development Strategy - Your Grid, Your Tomorrow* (2017) (ENCL1), to serve the future electricity needs of Limerick. This includes the delivery, integration and connection of renewable energy proposals to the grid in a sustainable and timely manner, subject to appropriate environmental assessment and the planning process.

7.6.3 Gas

Gas Networks Ireland (GNI) is responsible for the development, operation, maintenance and delivery of gas safely to businesses, the community and to power stations for the generation of electricity. GNI's *Network Development Plan 2018 - Assessing Future Demand and Supply Position* outlines how the gas network will develop over a ten-year period, based on existing supply and demand, as well as projections for growth in gas infrastructure and consumption. The document also examines system operation and consequent capital investment requirements by GNI to deliver the objectives of the NDP. In working towards securing a low carbon economy and meeting carbon emission targets, GNI are progressing ideas around the development of renewable gas injection infrastructure and Compressed Natural Gas Infrastructure, which could be used in the transport and agricultural sectors in particular.

Objective IN O14 Gas Development

It is an objective of the Council to support GNI's *Network Development Plan 2018 - Assessing Future Demand and Supply Position* to serve the future needs of Limerick. This includes the delivery, integration and connection of renewable energy proposals to the grid in a sustainable and timely manner, subject to appropriate environmental assessment and the planning process.

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7.7 Waste Management

Policy support for waste management at EU level is set out in the EU *Action Plan for the Circular Economy – Closing the Loop, 2015* and European Commission's *Circular Economy Action Plan: A New Circular Economy Action Plan for a Cleaner More Competitive Europe, 2020*. Building a circular economy is central to these Plans.

A number of EU Directives deal with waste management and these 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. The Environmental Protection Agency and Local Authorities implement waste policy and legislation.

The current national waste policy document is the *Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020 - 2025*, DECC, 2020, which contains over 200 measures across various waste areas. The NPF deals with waste management infrastructure as part of National Strategic Outcome 9 – Sustainable Management of Water and other Environmental Resources. Waste management 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 NPF identifies that planning for waste treatment 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.

Support for waste infrastructure investment is provided under RPO 109 in the RSES.

Limerick City and County Council is part of the Southern Waste Region and is the joint lead authority with Tipperary County Council for waste management planning for the Southern Region. The *Southern Region Waste Management Plan 2015-2021* establishes regional policy in relation to the management of non-hazardous waste across the Southern Region.

The strategic vision of the *Southern Region Waste Management Plan 2015-2021* and its forthcoming replacement, is to rethink our approach to managing waste, by considering waste streams as valuable material resources, leading to a healthier environment and creating sustainable commercial opportunities for our economy. The *Waste Management Plan*, provides the framework for the prevention and management of waste in a safe and sustainable manner and includes the promotion of resource efficiency and the concept of the circular economy as one of its strategic objectives.

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7.7.1 Waste Management and the Circular Economy

A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use and regenerating natural systems.

The circular economy aims to maintain the value of products, materials and resources for as long as possible, rather than the 'take-make-waste' linear model. The circular economy process begins from design phase through production and operation and final reuse or recovery back into the loop. This circular approach saves finite natural resources and presents new business and social opportunities.

Circular economy policy is now adopted at European and national level. Under the European Green Deal, a new *Circular Economy Action Plan: 'For a cleaner more competitive Europe'* was launched in March 2020. Circular economy actions tie in with other European targets, such as the ambition of achieving carbon neutrality by 2050, boosting the economy through increased jobs and growth, climate and energy, the social agenda, industrial innovation and international sustainable development goals. Linked with the Circular Economy Action Plan, the *European Plastic Strategy* has also been agreed, which includes increased plastic recycling targets. Furthermore, the Single Use Plastics (SUPs) Directive targets ten categories of SUPs that will not be permitted on the Market from July 2021. Ireland's policy *Waste Action Plan for a Circular Economy, Ireland's National Waste Policy 2020-2025* seeks to have a circular economy that reduces our carbon impact and protects our natural resources, environment and health. Such a circular economy also supports viable and sustainable enterprise opportunities, jobs and training³.

7.7.1.1 What are the benefits of the Circular Economy?

As well as saving on scarce resources and protecting our environment, the circular economy also provides cost savings and job opportunities along the supply chain, from production through to reprocessing of materials, as well as facilitating community and social enterprise initiatives around reuse, repair and recycling. Consumers too can benefit from a cost savings viewpoint, through increased durability and reparability of the products that they purchase.

7.7.1.2 Circular Economy for Building Design and Construction Projects

The concept of the circular economy can be applied to the whole lifecycle of new developments, from planning and design right through demolition, construction, end-use and repurposing or end of life of a development. To adopt the principle of the circular economy more fundamentally, applicants shall be encouraged to submit a Resource Management Plan, including a Circular Economy Statement, covering different phases of the project from initial design through to construction and end-use functioning. This approach would help the application of modular construction and the facilitation for easy repair and replacement of components and repurposing for reuse. Avoidance of demolition should be promoted in order to promote circularity and/or design for disassembly to facilitate reuse and recycling of materials back into a circular economy loop.

³ Waste Action Plan for a Circular Economy (Sept 2020, Dept of Environment, Climate and Communications)

7.7.1.3 Economic Opportunities around the Circular Economy

By embedding sustainability into the economy, the circular economy provides potential for economic and financial gains, through employment in green activities to replace employment in traditional industry that is either being ceased or upgraded with newer more automated technologies. A current example is the potential for transferring jobs from peat extraction and processing to new green jobs, such as reinstatement and protection of wetlands, or energy retrofitting of homes. Jobs in the circular economy can open up in areas such as repair, upcycling and green technologies for reprocessing of secondary materials for recycling and recovery. This includes significant potential in establishing or expanding social enterprises, which have a significant role to play in society, as highlighted in *National Social Enterprise Policy for Ireland*.

There is an urgency to transition to a low carbon future (RPO56 of the RSES). The concept of the circular economy goes in tandem with moving to a low carbon economy, which is now seen as an essential core to development planning.

7.7.1.4 Bioeconomy

The circular bioeconomy is a manifestation of the circular economy and covers potential for recovery of materials and by-products to create new products of high value, or alternatively recovery of biomass as energy. The principles of the circular economy can be applied to increasing the benefits from agricultural and forestry practices.

7.7.1.5 Applying the Principles of the Circular Economy to Effective Waste Management

While designing for waste prevention is the most desirable and effective option, waste that is generated can be accommodated in the circular economy reuse loop, through preparation for reuse, recycling and recovery.

Applying the circular economy to waste management can be accommodated through provision of adequate facilities and infrastructure – from designing for waste segregation and access within residential and commercial development projects, through to adequate infrastructure for handling and reprocessing of waste. The principles of the circular economy will form a fundamental part of the forthcoming *National Waste Management Plan for a Circular Economy*. This national plan will also incorporate new guidance *Waste Management Infrastructure – Guidance for Siting Waste Management Facilities* which will come into effect during the lifetime of the Draft Plan.

Objective IN O15

Waste Management and the Circular Economy

It is an objective of the Council to:

- a) Support innovative, smart solutions and processes, based on the principles of the circular economy to implement the *Regional Waste Management Plan for the Southern Region 2015 – 2021* and any subsequent plan, including any targets contained therein.
- b) Collaborate with the Regional Waste Management Office and other agencies to implement the *EU Action Plan for the Circular Economy – Closing the Loop, 2015*, its successor the *Circular Economy Action Plan: A New Circular Economy Action Plan for a Cleaner More Competitive Europe, 2020* and the *Resource Opportunity-Waste Management Policy, DECLG, 2012* and any subsequent plans.
- c) Promote sustainable patterns of consumption and production in the areas of product design, production processes and waste management.
- d) Implement the provisions of the *Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020 – 2025, DECC, 2020* in the assessment of planning applications.
- e) Protect existing civic amenity sites and bring sites throughout Limerick and support the development of additional sites in accordance with the *Southern Regional Waste Management Plan 2015 – 2021* and any subsequent plans.

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7.7.2 Waste Infrastructure

Waste infrastructure includes reference to waste transfer stations, material/waste recovery facilities, waste to energy businesses, waste disposal to landfill and authorised treatment facilities for End-of-Life Vehicles. The collection and processing of waste is generally privatised in Ireland, but Local Authorities have a key role in the provision and management of civic amenity and bring bank infrastructure. The Council is responsible for the aftercare of a significant number of closed and historic landfill sites across Limerick City and County, including the Long Pavement former landfill site in the City and Gortnadroma Landfill Site which closed in 2014, but remains operational as the Gortnadroma Waste and Recycling Centre.

As a Planning Authority, the Council's role is limited to guiding the location of new waste management facilities to appropriate zoned lands, setting the relevant development management standards and ensuring these developments comply with the relevant EU and national legislation and guidelines. The Council provides a number of Civic Amenity Sites and Bring Banks throughout a number of settlements in Limerick. Through the planning application process, the Council occasionally requires the provision of bring banks or other appropriate recycling facilities, as part of the overall development in the case of new or extended retail centre developments and commercial local/neighbourhood centres, educational, sports and recreational facilities.

Limerick City and County Council issues authorisations for various waste related activities. These activities vary from importation of waste soils and rubble to raising land levels, to vehicle dismantling. The activity must have planning permission or be planning exempt, before a permit or certificate of registration is issued. The Council maintains the Waste Facilities Register which includes all waste facility permits and certificates of registration issued by Local Authorities under the Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007, as amended.

Waste facilities may operate under an EPA Licence. Any person who proposes to collect waste for the purposes of reward, with a view to profit or otherwise in the course of business, is required to hold a Waste Collection Permit (Section 34, Waste Management Act, 1996).

End-of-life vehicles facilities (Authorised Treatment Facilities (ATFs)) must meet stringent environmental standards for the collection, storage and treatment of such vehicles.

The Council will only consider the location of waste infrastructure outside of appropriately zoned lands in the following circumstances:

- Where extensive lands are required, that are related to existing or planned Irish Water sites;
- Where the characteristics of the facility are such that a rural location is necessary to achieve separation distances from residential properties; or
- Where the development is necessary for the proper implementation of the *Southern Region Waste Management Plan 2015-2021* and any subsequent Statutory Waste Management Plan.

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Objective IN O16 Waste Infrastructure

It is an objective of the Council to:

- a) Direct waste management facilities to appropriately zoned lands, subject to normal planning and environmental criteria and the relevant Development Management Standards as set out in Chapter 11 of this Draft Plan.
- b) Maintain recycling facilities and require the provision of bring banks or other appropriate recycling facilities as part of the overall development in the case of new or extended retail centre development and commercial local/ neighbourhood centres, educational, sports and recreational facilities. These facilities shall be provided and maintained by the developers, operational management companies and occupiers.
- c) Use the regulatory enforcement powers available to the Council under the Planning and Development Act 2000 (as amended) and under the Waste Management Act 1996 (as amended), to address unauthorised waste facilities and the illegal disposal of waste in Limerick.

7.7.3 Sludge Management

Wastewater sludge is semi-solid remains in a wastewater treatment plant, after the treated water is discharged to either ground or surface waters. It comprises mainly of energy rich organic matter removed during treatment and is a valuable by-product of the wastewater treatment process. Further treatment is required to ensure the safe and efficient re-use or disposal of the sludge. The proliferation of single rural dwellings with on-site treatment units and septic tanks requires de-sludging services on a regular basis. Similarly, public treatment plants also require de-sludging.

In the *National Waste Water Sludge Management Plan*, Irish Water proposes to expand on the provision of 'sludge centres' and satellite facilities in Limerick. These proposals include upgrading the existing sludge centre at Bunlicky and the construction of dewatering satellite facilities in Newcastle West, Rathkeale, Foynes-Shanagolden and Cappamore. In the case of sludge management facilities, these facilities are best suited to sites of existing public wastewater treatment facilities, due to the nature and characteristics of existing operations on these sites and the need to strictly control the treatment of sludge.

Sludge from wastewater treatment plants and septic tanks can only be used in agriculture in accordance with the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998 and 2001 and the Department of Housing, Planning and Local Government *Codes of Good Practice for the Use of Bio-solids in Agriculture*.

Objective IN O17 Sludge Management

It is an objective of the Council to:

- a) Support the provision of sludge management infrastructure at suitable locations in accordance with Irish Water's *National Waste Water Sludge Management Plan*, whilst not compromising environmental obligations.
- b) Restrict the provision of sludge management facilities to the sites of existing public wastewater treatment facilities due to the nature and characteristics of existing operations on these sites and the need to strictly control the treatment of sludge.
- c) Require that the treatment and management of sludge waste is carried out in a safe, efficient and sustainable manner, having regard to the protection of the environment and public health and in compliance with the Waste Framework Directive, the Nitrates Directive, the Waste Management Act and all relevant statutory instruments.

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7.7.4 Agricultural Waste and Farm Plastics

When assessing planning applications for development associated with waste from livestock, the Council will require adherence to the requirements of the Waste Management (Use of Sewage Sludge in Agriculture) Regulations 1998 and 2001 and the *Code of Good Practice for the Use of Bio-solids in Agriculture*, DPLG. These regulations and codes of practice require that sludge is only used in accordance with a Nutrient Management Plan, which the Council is responsible for assessing, when processing planning applications for agricultural developments involving livestock waste disposal. Applicants will be required to submit a Nutrient Management Plan prepared by a suitable qualified professional to the Council, as part of a planning application for agricultural developments.

Farming has become one of the largest regular users of plastic film in this country, particularly for silage cover sheets and bale wrapping. Irish legislation places an obligation on manufacturers and importers of farm plastics to arrange for suitable collection and disposal of used plastic film. The Waste Management (Farm Plastics) Regulations 2001 (as amended) promote recycling of farm plastic waste and place an obligation on farmers to recover farm plastic waste generated. The regulations place a legal responsibility on producers of farm film products to support recycling. Enforcement of the regulations is the responsibility of Local Authorities and the Planning and Environmental Services section of the Council have responsibility for this.

The Irish Farm Film Producers Group (IFFPG) is a national farm plastics recycling compliance scheme, providing a recycling service for farmers for farm plastics (silage plastics for pits and bales, fertiliser bags, feed-bags, chemical containers, netting and twines). Private waste collectors may also provide a collection service to farmers subject to securing the necessary permit.

Prosecutions under the Air Pollution Act, 1987 or the Waste Management Act, 1996, as amended may issue for the burning or burying of farm plastics.

Objective IN O18 Agricultural Waste

It is an objective of the Council to:

- a) Encourage the development of new alternatives and technological advances in relation to waste management on the farm and waste infrastructure such as Organic Waste to Energy/Combined Heat and Power schemes, subject to compliance with normal planning and environmental criteria.
- b) Require that the disposal of agricultural waste is carried out in a safe, efficient and sustainable manner, having regard to protection of the environment and public health and in compliance with the Nitrates Directive, Good Agricultural Practice for the Protection of Waters) Regulations 2017 (SI 605 of 2017), the Habitats Directives and any other relevant statutory provisions.

7.7.5 Construction and Demolition Waste

Construction related waste accounts for a significant proportion of total landfill waste in Ireland. During construction, measures should be implemented to minimise soil removal (as part of the scheme design process), properly manage construction waste, design with and use smart materials on the principles of the circular economy and encourage off-site prefabrication where feasible. All future developments should seek to minimise waste through reduction, re-use and recycling. Waste management and disposal should be carefully considered as part of the construction process and in the operation of the development when completed.

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Under waste legislation construction and demolition waste is defined as ‘all waste that arises from construction, renovation and demolition activities’. It includes soil and stone, surplus and damaged products/materials arising from construction works, or used temporarily during construction and dredge spoil. These materials can be hazardous. Those responsible for carrying out a construction and/or demolition project must ensure that they have a Waste Management Plan for all waste generated and ensure the segregation of waste for re-use, recycling or disposal appropriately. Developers shall submit, as part of a planning application, a Waste Management Plan. Where construction or demolition waste cannot be reused or recycled, the waste must be transported to authorised waste facilities using the services of authorised waste collectors. In the case of demolition, the developers will be required to submit a Refurbishment/Demolition Asbestos Survey (RDAS) with full details of disposal of the asbestos. The RDAS should be carried out in accordance with Section 8 of the Health and Safety Authority, *Asbestos Guidelines (Practical Guidelines on ACM Management and Abatement)* by a suitable qualified professional with expertise in asbestos disposal.

At the design stage, consideration should be given to the use of renewable building materials, such as wood, from sustainably managed forests and locally sourced building materials for development projects. Other aspects should be considered, including offsite construction and prefabrication to minimise the impact of building on the site, reductions in levels of onsite waste and also minimising the cost of waste disposal. The reuse of construction waste such as excavated material and topsoil onsite is welcomed, subject to the appropriate assessment of the presence of invasive species onsite. Any materials used in the construction of new buildings should comply with the minimum standards as set out in the Building Regulations (1997-2019).

Objective IN 019

Construction and Demolition

It is an objective of the Council to:

- a) Require construction Waste Management Plans to be submitted as part of planning applications, to address waste management on site during construction and mitigation measures to address waste generation, in accordance with the principles of the circular economy and the principles of prevention, renewal and recycle.
- b) Require a Refurbishment/ Demolition Asbestos Survey (RDAS) with full details of disposal of the asbestos to be submitted with any planning application. The RDAS should be carried out in accordance with Section 8 of the Health and Safety Authority, *Asbestos Guidelines (Practical Guidelines on ACM Management and Abatement)* by a suitable qualified professional with expertise in asbestos disposal.

7.7.6 Closed Landfills or Historical Landfill Sites

A closed landfill is a landfill site operated by a Local Authority for the recovery or disposal of waste without a waste licence on any date between 15/07/1977 and 27/03/1997 (i.e. prior to the Waste Management (Licensing) Regulations, 1997 (S.I. No. 133 of 1997)). The Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008) provide for the certification by the EPA of historic unlicensed landfill sites. There are a number of historical sites known to the Council. The EPA is obliged to process applications from Local Authorities in relation to ‘closed landfills’, in accordance with the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008.

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Objective IN O20**Closed Landfills or Historical Landfill Sites**

It is an objective of the Council to:

- a) Continue to restore the Long Pavement landfill site into a positive landscape feature that provides a recreational, amenity and biodiversity resource for the community, as guided by best practice in environmental protection, public amenity, proper planning and sustainable development.
- b) Co-operate with the EPA regarding historical landfills. Risk assessments by the Council shall be carried out in accordance with the *Code of Practice - Environmental Risk Assessment for Unregulated Waste Disposal Sites* and to the requirements of the EPA. When zoning lands for development and/or considering future developments on, or in the vicinity of, identified historic landfill sites, the Council will have regard to this Code.

7.7.7 Hazardous Waste and Contaminated sites

A waste is hazardous when it can harm human health or the environment, because it is explosive, oxidising, flammable, toxic, carcinogenic, corrosive, infectious, mutagenic, sensitising, or eco-toxic. Industry is the largest generator of hazardous wastes such as industrial solvents, sludges, oils and chemicals. Other sectors such as businesses, construction, healthcare, farms and households also produce hazardous wastes. Civic Amenity Centres collect a range of hazardous waste from households for safe disposal. In Ireland, hazardous waste is treated either on-site at the industrial facility where the waste was generated (under conditions of EPA licence), or offsite at hazardous waste treatment facilities in Ireland, or at facilities in other countries.

The EPA's *National Hazardous Waste Management Plan (NHWMP) 2014-2020* sets out the priorities to improve the management of hazardous waste. There is no commercial hazardous waste landfill in the State and there are limited hazardous waste treatment operations (these are mainly used for oil recovery, healthcare waste treatment and solvent reclamation), meaning that Ireland is dependent on export for treatment of many hazardous waste streams. The Council will continue to require that hazardous waste is disposed of in a safe manner, in accordance with the NHWMP and any subsequent amendments or revisions of the Draft Plan.

Contaminated lands are sites where there are contaminated substances above or below ground, either directly disposed of, or due to by-products (particulate or fluid residue) of historical land use and activities on site (such as materials, processing or storage). Such contaminants could cause significant harm and endanger human health. Examples of land uses that may have caused such contamination include gas works, landfill sites, creameries, tanneries etc. The Docklands area of Limerick City, given its industrial use since the turn of the century and to the present day, may have a legacy of contaminants in the soil and groundwater. Similarly, there are many historical industrial sites scattered with contamination legacies across Limerick City and County. 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 that appropriate mitigation strategies can be implemented before any development may take place.

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Objective IN O21**Hazardous Waste and Contaminated Sites**

It is an objective of the Council to:

- a) Implement the EPA's *National Hazardous Waste Management Plan (NHWMP) 2014-2020* and any subsequent plans.
- b) Collaborate and seek guidance from the Environmental Protection Agency (EPA), the Health and Safety Authority (HAS), Health Service Executive (HSE) and Southern Region Waste Management Office, on the technical requirements for clearance and redevelopment of any contaminated lands when dealing with planning applications at these locations.

7.7.8 SEVESO Sites

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) seek to prevent major accidents, involving dangerous substances and chemicals, through controls on the location of new establishments, modifications to existing establishments 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 or dangerous for the environment. Threshold quantities are specified in the legislation for named substances, categories of substances and groups of categories. Sites are classified as Lower Tier or Upper Tier, depending on whether the lower or upper threshold is exceeded.

Table 7.1
Seveso Sites in Limerick, 2019

Tier	Name	Location
Upper Tier	Analogue Devices International	Raheen Business Park, Limerick
	Grassland Agro	Dock Road, Limerick City
	Inter Terminals Shannon Ltd.	Foynes Harbour, Co. Limerick
Lower Tier	Atlantic Fuel Supply Company Ltd.	Foynes Harbour, Co. Limerick
	Goulding Chemical Ltd.	Mongan's South Durnish Askeaton, Co. Limerick

Source: hsa.ie

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The Health and 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 and Development Regulations 2001 (as amended) (SI No 600 of 2001). Distances vary depending on the nature of activity at the site. Such technical advice will be taken into account when considering applications for planning permission, on and within the vicinity of Seveso sites.

Objective IN O22 SEVESO Sites Objectives

It is an objective of the Council to:

- a) Inform the Health and Safety Authority of any development proposals within the thresholds of 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), including modifications to existing Seveso establishments.
- b) Have regard to potential adverse impacts on public health and safety, including maintaining appropriate safe distances between Seveso sites and residential areas, areas of public use and areas of environmental sensitivity.
- c) Ensure in addition to normal planning criteria, that new developments such as transport links, locations frequented by the public and residential areas in the vicinity of existing Seveso sites, comply with the requirement of the Seveso Directive, including the consultation distances surrounding establishments designated as containing hazardous substances.

7.7.9 Waste Tyres

While waste tyres are not classified as hazardous, they can cause environmental pollution if disposed of incorrectly or irresponsibly. In 2017, Waste Management (Tyres and Waste Tyres) Regulations introduced new regulatory structures for the tyre sector, requiring disposal of tyres to comply with the Repak ELT scheme for recycling and recovery of tyres. The scheme is based on the Producer Responsibility model that has worked successfully in this country for other waste streams, such as packaging, batteries and waste electrical electronic goods (WEEE). Future development activity with significant tyre use/generation will be required to submit details of safe disposal during the planning application process.

7.7.10 Litter Management

Litter continues to be a challenge locally and nationally and the emphasis will continue to be on reducing and managing litter effectively. The Council acknowledges that the primary enforcement responses must come from the Council. However, the co-operation of all members of the community is required, to raise awareness of the harmful effects of litter. The Council recognises that the participation and support of all sectors of society is required if littering is to be successfully eradicated. Limerick City and County Council's *Litter Management Plan 2019-2022* affirms the Council's commitment to litter prevention in Limerick. This Draft Plan outlines the objectives and actions in relation to awareness and prevention, control and enforcement of littering for the period 2019 to 2022. The *Litter Management Plan* will be reviewed annually in accordance with Section 10(3) of the Litter Pollution Act 1997 as amended.

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