

CHAPTER 6

INFRASTRUCTURE AND

ENVIRONMENTAL

MANAGEMENT

Chapter 6 Infrastructure and Environmental Management

Aim: To seek the provision and maintenance of high quality infrastructure networks and environmental services in conjunction with other statutory bodies which seeks to complement the overall economic and settlement strategy, contributes to sustainable development and is in accordance with the proper planning and sustainable development of the area.

6.0 Introduction

The availability of high quality infrastructure networks and environmental services is critical to securing economic investment, creating sustainable and attractive places, in ensuring health and wellbeing and in safeguarding the environment.

6.1 Water Services

Irish Water is responsible for public water services in Ireland (water supply and foul drainage) including the delivery, integration and implementation of strategic water and wastewater projects and infrastructural improvements within the County. Irish Water has prepared a Water Services Strategic Plan (WSSP) that sets out strategic objectives for the delivery of water services in Ireland up to 2040. Carlow County Council is contracted to manage and maintain aspects of the water supply and foul drainage networks at a local level through a Service Level Agreement with Irish Water. The Council will collaborate with Irish Water in contributing towards

compliance with the relevant provisions of the Urban Waste Water Treatment Regulations 2001 and 2004, the Waste Water Discharge (Authorisation) Regulations 2007 as amended, the European Union (Drinking Water) Regulations 2014 (as amended) and with the parameters identified in these Regulations.

IRISH WATER POLICY DOCUMENTS

Irish Water Services Strategic Plan	This is an integrated national plan for the delivery of a transformed water and wastewater network. The WSSP is an essential part of ensuring the availability of safe drinking water as well as protecting the environment from the impacts of wastewater discharges.
Irish Water National Resources Plan	This is a 25-year strategic plan to identify how a sustainable, secure and reliable water supply will be supplied into the future whilst safeguarding the environment.
Irish Water Business Plan	Sets out key water services deliverables for the period 2015-2021.
Irish Water Capital Investment Plan 2020-2024	The Investment Plan sets out Irish Water's budgetary plan from 2020-2024 in line with strategic objectives detailed in the Water Services Strategic Plan (WSSP). The primary function is to provide clean drinking water to customers and to treat and return wastewater safely to the environment.
National Wastewater sludge management Plan	Sets out a nationwide standardised approach to ensure that treated 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.

6.1.1 Water Supply- Public Water

The 2016 Census recorded 65% of private households in Carlow are serviced by public water supplies which is considerably lower than the state average of 77%. Public water supply in Carlow is served by nine water resource zones, namely Carlow North, Carlow Central Regional, Bagenalstown, Bilboa, Leighlinbridge, Borris, Hacketstown, Ballinkillen and Old Leighlin. The main water source is surface water abstraction from the River Burren and River Slaney.

Good headroom exists across all water resource zones allowing for potential future development, but it is advised that a pre-connection enquiry be made to Irish Water when considering future development proposals. This enquiry will establish / confirm whether further investigative studies or interventions are required over the Plan period.

In summary, of the nine water resource zones, Irish Water have estimated that the smaller water resource zones of Bagenalstown, Leighlinbridge and Ballinkillen are unlikely to have issues facilitating new connections. The remaining six water resource zones may require further investigative studies or interventions to facilitate significant new connections / developments to the network. The full options assessment stage of the National Water Resource Plan (NWRP) is currently progressing nationwide. Irish Water in consultation with Carlow County Council, have also completed the full options assessment for sections of Carlow (including Carlow town). The full options assessment for the remainder of the County will fall into later stages of the NWRP. The full options assessments will identify the preferred interim and long-term interventions required

to ensure a sustainable water supply in County Carlow.

It is a priority of the Council to work with Irish Water to ensure adequate delivery of public water supplies and to increase the number of households served by public water where available in the interests of sustainable development and maximising investment in public water infrastructure.

The Council in conjunction with Irish Water will have regard to the EPA 2020 publication “Drinking Water Report for Public Water Supplies 2019” (and any subsequent update) in the establishment and maintenance of water sources in the County. Furthermore, In conjunction with Irish Water, the Council will undertake recommendations made by the EPA arising from any failure to meet drinking water standards and any enlistment on the EPA’s Remedial Action List.

6.1.2 Water Supply – Group Water Schemes and Private Supplies

In 2016, 32% of private households in the County sourced their water supply from group water schemes or private wells. These supplies provide alternatives for areas not serviced by public water supply infrastructure.

The Rural Water Programme facilitates the development of water services in rural areas and it plays an important role in seeking improvements in deficiencies in group water schemes and private supplies where no alternative group or public water scheme is available. The group water schemes in Carlow under the Rural Water Programme are Ballinabrannagh, Glynn/St Mullins, Ballyloughan and Ballyellen.

Investment under the programme is prioritised for upgrades which help to deliver measures identified in the National River

Basin Management Plan to meet the Water Framework Directive, to meet the requirements of the Drinking Water Directive and the overall proper planning and sustainable development of the area.

6.1.3 Ground Water

Ground waters are of importance as a water source for private wells and group schemes and for a range of commercial activities. Source protection plans for groundwater supplies cover the following public water schemes; Bagenalstown, Ballinkillen, Bilboa, Ticknock, Oak Park, Leighlinbridge and Old Leighlin. Additionally, source protection plans have been prepared for a number of group water schemes to include Ballinabranna, Ballyellen and Glynn/St. Mullins.

The Council seeks to ensure that groundwater is protected by ensuring compliance with the following:

- The appropriate control of development in areas of high groundwater vulnerability.
- Implementation of the Programme of Measures as required in the River Basin Management Plan.
- Licensing of discharges of effluent to groundwater, having particular regard to the requirements of the EC Environmental Objectives (Groundwater) Regulations, 2010 (S.I No. 9 of 2010).
- Implementation of the EC (Good Agricultural Practice for Protection of Waters) Regulations 2017 (SI 605 of 2017).
- Regulations on the use of sewage sludge in agriculture.
- EPA Code of Practice for Domestic Waste Water Treatment Systems (2021).

The use of private wells to provide water to single houses remains the responsibility of the householder.

6.1.4 Drinking Water Protection Plans

The Water Framework Directive requires the identification of Drinking Water Protected Areas (DWPAs). These are reservoirs, lakes, rivers and the groundwater bodies from which water is abstracted to provide water for people to drink. The Council will seek to protect both ground and surface water resources and will work with Irish Water to develop and implement Drinking Water Safety Plans to protect sources of public water supply and their contributing catchment. The Council will also work with the National Federation of Group Water Schemes in respect of their Source Protection Plans for Group Water Schemes as outlined in 6.1.3.

6.1.5 Water Conservation

Water conservation is key to the sustainable use of water resources. Irish Water and Carlow County Council are continually progressing leakage reduction activities, mains rehabilitation activities and capital maintenance activities. Irish Water and Carlow County Council will continue to monitor the performance of the networks to ensure that the most urgent works are prioritised as required. The Council will also promote best practice water conservation practices in all new developments.

6.1.6 Water Supply -Policies

It is the policy of the Council to:

WS P1: Work in conjunction with Irish Water to protect existing water and associated drainage infrastructure and to promote investment in the

water and drainage network to support environmental protection and facilitate the sustainable growth of the County.

WS P2: Collaborate with Irish Water in relation to the preparation of their Investment Plans in order to align the supply of water services with the Core Strategy and Settlement Hierarchy.

WS P3: To support Irish Water in delivering key water service projects to meet the future needs of the County subject to compliance with all relevant EU and national legislation and normal environmental and planning criteria.

WS P4: Assist Irish Water in their commitment to water conservation and support efforts to address leakage including watermains rehabilitation.

WS P5: Promote best practice water conservation practices in all developments including rainwater harvesting and grey water recycling and supporting the implementation of BS8515-2009 Rainwater Harvesting Systems – Code of Practice.

WS P6: Require new developments where public water supply and network infrastructure is available to seek a connection to existing public water mains where viable.

6.1.7 Water Supply - Objectives

It is an objective of the Council to:

WS O1: Work with Irish Water to protect, manage and optimise water supply networks in the County and to seek the timely delivery of ongoing

upgrades to the watermain networks in towns, villages and those serving the rural population including the significant asset of the trunk main between Rathvilly and Brownhill providing a significant portion of the water supply for the Greater Carlow Urban Area.

WS O2: Work with Irish Water in progressing the upgrade of Rathvilly Water Treatment Plant, provision of additional reservoir storage at Leighlinbridge, and improved resilience of supply in the Carlow Central Region, Hacketstown and Bilboa.

WS O3: Work with Irish Water to ensure expansion of water supply to meet the future needs of the County in the medium to long term.

WS O4: Support the implementation of the Rural Water Programme.

6.2 Public Wastewater Collection and Treatment

Irish Water is responsible for the delivery, integration and implementation of strategic public wastewater projects and infrastructural improvements in the County. There are currently 25 no. public wastewater treatment plants (WWTP) in the County. The upgrade of Tullow WWTP upgrade is currently at construction stage with anticipated timeframe for completion in Q4 2023. The anticipated timeframe for completion of the Muinebheag/Leighlinbridge WWTP upgrade is Q1 2024. Improvement and upgrade works are also proposed for Mortarstown WWTP in Carlow, and Borris WWTP. At the lower end of the settlement hierarchy, there are constraints in three of the Larger Serviced

Villages, and Irish Water has recently announced funding for the provision of a WWTP upgrade at Ballinabracknagh under the “Small Towns and Villages Growth Programme” (STVGP).

Irish Water will commence a Drainage Area Plan (DAP) for Carlow Town in Q1 2022. The DAP will assess the performance of the wastewater networks in the town. In parallel with the DAP, a Strategic Network Development Plan is also being progressed by Irish Water for Carlow Town, which will be a high-level study that will help inform how undeveloped zoned sites within the town could be serviced.

Irish Water and Carlow County Council are continually progressing sewer rehabilitation activities, capital maintenance activities and other such works. Irish Water and Carlow County Council will continue to monitor the performance of the networks to ensure that the most urgent works are prioritised as required over the Plan period.

Public Wastewater Collection and Treatment - Policies

It is the policy of the Council to:

PW P1: Support strategic wastewater treatment infrastructure investment by Irish Water and to support Irish Water in providing and maintaining adequate and appropriate wastewater treatment infrastructure to service zoned lands, towns and villages and developments over the period of the Plan in accordance with the Core Strategy and Settlement Hierarchy.

PW P2: Facilitate Irish Water in the delivery of public wastewater services which address the residential, commercial

and industrial needs of the County subject to compliance with all relevant EU and national legislation and normal planning and environmental criteria.

PW P3: Encourage and support a changeover from septic tanks/ private wastewater treatment plants to public collection networks wherever feasible, subject to connection agreements with Irish Water and to ensure that any future development connects to the public wastewater infrastructure where it is available.

Public Wastewater Collection and Treatment - Objectives

It is the objective of the Council to:

PW O1: Facilitate the required upgrade of wastewater projects that may arise during the lifetime of this Plan subject to compliance with all relevant EU and national legislation and normal planning and environmental criteria including upgrade and improvement works on current and planned IW schemes for Tullow WWTP, Bagenalstown/Leighlinbridge WWTP, Mortarstown WWTP, and Borris WWTP.

PW O2: Work and support Irish Water in progressing the “Small Towns and Villages Growth Programme” which is intended to provide growth capacity at WWTPs (and WTPs) in smaller settlements which would not otherwise be provided for in the current Investment Plan.

PW O3: Work and support Irish Water, other public infrastructure agencies and

local communities to develop the programme for “new homes in small towns and villages” through land activation and supportive works (e.g. serviced sites) as set out in NPO 18b of the National Planning Framework.

6.3 Wastewater Treatment – Single Domestic Dwellings

Carlow County Council is the designated Water Authority for the assessment and approval of individual private domestic on-site wastewater treatment systems. These systems are the main method of sewage disposal in unserviced areas and outside the main towns and villages. The requirements for these systems are set out in the EPA Code of Practice for Domestic Waste Water Treatment Systems (2021). It is essential that these systems are properly installed, regularly monitored and maintained so as to protect health and the environment. The Council will continue to carry out inspections under the National Inspection Plan for Domestic Wastewater Treatment Systems to protect human health and water quality from the risks posed by these systems.

Wastewater Treatment – Single Domestic Dwellings - Policy

It is the policy of the Council to:

WW P1: Require that private wastewater treatment systems for individual houses where permitted, comply with the recommendations contained within the EPA Code of Practice for Domestic Waste Water Treatment Systems (2021) Serving Single Houses (population equivalent less than or equal to 10) or any updated version during the

period of this Plan, the Water Framework Directive, the National River Basin Management Plan 2018-2021 (as maybe updated) and the Habitats Directive.

6.4 Wastewater Treatment – Commercial and Tourism Uses

The use of private wastewater treatment systems to serve commercial and tourism uses (employment generating development) outside of serviced settlements and in rural areas will be considered on their merits where the proposed use is acceptable on planning grounds, where the system and overall development is retained in single ownership and where it is demonstrated to the satisfaction of the Planning Authority that the proposed wastewater treatment system is in accordance with the ‘Code of Practice for Domestic Waste Water Treatment Systems, EPA 2021 and Wastewater Treatment Manuals – Treatment Systems for Small Communities, Business, Leisure Centre and Hotels, EPA 1999, and any updated versions of these documents, the Water Framework Directive, the National River Basin Management Plan 2018-2021 (as maybe updated) and the Habitats Directive.

Shared private wastewater treatment plants for new multi-house developments will not be permitted.

Wastewater Treatment – Commercial and Tourism Uses - Policies

It is the policy of the Council to:

WT P1: Ensure that the proposed wastewater treatment system for development in unserviced areas complies with the relevant EPA Code of Practice, the Water Framework Directive, the

National River Basin Management Plan 2018-2021 (as maybe updated) and the Habitats Directive. There will be a general presumption that development will be focused into areas that are serviced by public wastewater collection networks where available.

WT P2: Prohibit the use of shared wastewater treatment systems for new multi-house developments in unserviced rural areas.

6.5 Surface Water Drainage

The Council is responsible for surface water drainage in the County. The management of surface and storm water is important so as to avoid increased flood or pollution risk in the storm water network, rivers and streams throughout the County. The Council will require compliance with best practice guidance for the collection, reuse, treatment and disposal of surface waters for all future development proposals.

The Council seeks to ensure the sustainable management of surface water discharges through the use of Sustainable Urban Drainage Systems (SuDS). SuDS seeks to manage the water as close as possible to its origin replicating the natural characteristics of rainfall runoff from any site, ensuring water is infiltrated or conveyed more slowly to the drainage system and ultimately to water courses via permeable paving, swales, green roofs, rain water harvesting, detention basins, ponds and wetlands. SuDS provides an integrated approach which addresses water quantity thereby reducing potential for flood risk, water quality, amenity and habitat.

Surface Water Drainage / SuDS- Policies

It is the policy of the Council to:

SW P1: Ensure adequate surface water drainage systems are in place which meet the requirements of the Water Framework Directive and the River Basin Management Plan.

SW P2: Ensure as an alternative to underground tanks and piped outfalls to watercourses, that all development proposals incorporate Sustainable Drainage Systems and to promote the use of green infrastructure e.g. green roofs, green walls, planting and green spaces for surface water retention purposes, as an integrated part of SuDS and maximise the multi-functional potential of these systems including benefits for biodiversity and amenity value wherever possible.

SW P3: Require appropriate maintenance of surface water drainage infrastructure to avoid flood risk.

SW P4: To require all new developments, to provide for separated drainage systems.

SW P5: Seek to minimise in as far as is practical the discharge of additional and existing surface water to combined (foul and surface water) sewers (in existing combined sewer serviced areas) in order to maximise the capacity of existing collection systems for foul water.

SW P6: Require all new developments to provide a separate foul and surface water drainage system and to incorporate sustainable urban drainage systems where appropriate /

viable in new development and the public realm.

Surface Water Drainage / SuDS- Objectives

It is the objective of the Council to:

SW O1: Require all development (including extensions to existing development) proposals to incorporate design criteria and SuDS measures in accordance with Carlow County Council SuDS Policy in order to reduce the potential impact of existing and predicted flood risks and to improve biodiversity and amenity value.

6.6 Waste Management

Waste management is integral to sustainable development, protecting public health and maintaining a high-quality environment. The role of local authorities in waste management has evolved and the principal areas of activity are now regulatory, education and enforcement related. Waste management policies are based on the EU Waste Hierarchy of prevention, preparing for re-use, recycling, energy recovery and sustainable disposal.

The recently adopted '*A Waste Action Plan for a Circular Economy, Ireland's National Waste Policy 2020-2025*', prepared by the Department of Communications, Climate Action and Environment (DCCAE), aims to shift the focus back up the product life cycle, to remove or design out harmful waste, to extend the life of products and goods and prevent waste arising in the first place. Opportunities are identified for the application of the circular economy principles across a range of areas.

The Planning and Development Act 2000 (as amended) states that a development plan shall include objectives for waste recovery

and disposal facilities. By virtue of Section 22(10A) of the Waste Management Acts 1996 (as amended), the objectives of the relevant Waste Management Plan are deemed to be included in the Development Plan.

6.6.1 Southern Regional Waste Management Plan 2015-2021 (SRWMP)

The Southern Regional Waste Management Plan 2015-2021 provides the framework for waste management in the Region and sets out a range of policies and actions to meet specified mandatory and performance-based targets. The plan embraces the circular economy approach and provides the framework for the prevention and management of waste in a safe and sustainable manner. Key targets of the plan include a 1% reduction in the quantity of household waste generated per capita over the plan period, achieving a recycling rate of 50% of managed municipal waste by 2020 and reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill from 2016 onwards in favour of higher value pre-treatment processes and indigenous recovery. Revision of the Southern Regional Waste Management Plan is anticipated to commence in 2021 / 2022.

6.6.2 Waste Management Infrastructure

Since 2015 significant progress has been made in the delivery of waste management infrastructure / initiatives including;

- The progressive restoration and remediation of the former Powerstown landfill site and development of an appropriate end-use suitable to the local environment.
- Establishment of a waste transfer station and recycling civic amenity site at Powerstown.

- The continuing maintenance, management and expansion of the ‘Bring Bank’ (27 no.) and recycling facilities across the County.
- The continuation of free waste electrical and electronic equipment (WEE) collection days at Powerstown Civic Amenity Site.
- Continued support and facilitation of schemes that encourage a once off collection scheme of varied waste streams at Powerstown Civic Amenity Site.
- Implementation of the County Carlow (Segregation, Storage and Presentation of Household and Commercial Waste) Bye-laws 2018.
- Supporting the implementation of the Green School’s Programme and environmental awareness programmes.
- Continued liaison, support and work with WERLA (Waste Enforcement Regional Lead Authority) the Southern Regional Waste Management Office (SRWMO), the Local Authority Prevention Network (LAPN), DCCAE, the EPA and other bodies.
- Enforcement of waste management legislation through continued inspections and enforcement in accordance with the Carlow Recommended Minimum Criteria for Environmental Inspection (RMCEI) Plan prepared annually having regard to National and Local Waste and Environmental priority objectives.
- Continued application and implementation of projects on an annual basis under the Anti-Dumping Initiative.

These initiatives have contributed to improved performance in terms of waste management throughout the County. The

Council will support the circular economy principles, prioritising prevention, reuse, recycling and recovery over the disposal of waste.

6.6.3 Litter Management

The Litter Pollution Act, 1997 (as amended) governs the management of litter. As a requirement of the Act, the Council has produced a Litter Management Plan 2021-2023 and is responsible for keeping public places in the county clear of litter. The Council has an Environmental Awareness Officer and promotes initiatives including the Green Schools Programme, Tidy Town Seminars, National Spring Clean, Irish Business Against Litter and local media campaigns.

6.6.4 Sludge Management

Irish Water is responsible for the treatment and disposal of sludge from both its water and wastewater treatment plants. The National Wastewater Sludge Management Plan (NWSMP) outlines Irish Water’s strategy to ensure a nationwide standardised approach for managing waste over a 25-year period (with 5 yearly reviews). A separate plan is being prepared in relation to sludge produced at drinking water plants.

6.6.5 Management of Certain Waste Sources

Management of certain waste sources will be required in accordance with best practice and legislative requirements to ensure adequate protection of the environment and in the interests of proper planning and sustainable development of the area.

Construction and Demolition Waste	Reuse and recycling of construction and demolition waste will be supported by the Council. The Council will have regard to and require compliance with the EPA's 'Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects 2021 in the management of waste from construction and demolition projects, which supersedes previous 2006 Guidelines published by the Department of the Environment, Heritage and Local Government.	Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008) provide for the certification of historic unlicensed waste disposal sites in operation between 1977 and 1996. The regulations require Local Authorities to register these facilities, to carry out risk assessments of the sites and to determine any remedial measures required. Carlow County Council has identified 1 historic unlicensed landfill site.
Hazardous Waste	The disposal of hazardous waste is provided for in the National Hazardous Waste Management Plan 2014-2020. The Council will continue to require that hazardous waste is disposed of in a safe manner in accordance with the National Hazardous Waste Management Plan and any subsequent amendments or revisions of this Plan.	
Agricultural Waste	Waste generated by agricultural activities including animal slurry, spent mushroom compost and straw must be disposed of in a safe manner to prevent pollution of ground waters and surface waters and to protect public health. The Nitrates Directive and the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2017 are key statutory regulators in the disposal of agricultural waste.	
Sludge Management	Sludge management is governed by waste legislation based on European Directives and National legislation. 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 the Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 2001 and the Department of Housing, Planning and Local Government Codes of Good Practice for the use of Biosolids in Agriculture. These regulations require that sludge is only used in accordance with a Nutrient Management Plan, which the Local Authority are responsible for assessing.	
Contaminated Soil	Contaminated soil / land has potential to cause significant harm and endanger health. In this regard the Council will require that all undeveloped, contaminated sites be remediated to internationally accepted standards prior to redevelopment (i.e. brownfield development). Treatment / management of any contaminated material shall comply as appropriate with the Waste Management Act 1996 (as amended) (waste licence, waste facility permit), and the Environmental Protection Act 1992 (as amended).	
Historic Landfills	The Waste Management (Certification of Historic Unlicensed Waste Disposal and	

6.6.6 Waste Management Infrastructure – Policies

It is the policy of the Council to:

WM P1: Implement European Union, National and Regional waste related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes.

WM P2: Encourage the transition from a waste management economy to a green circular economy in accordance with *A Waste Action Plan for a Circular Economy, Ireland's National Waste Policy 2020-2025*, to enhance employment and increase the value recovery and recirculation of resources.

WM P3: Support the circular economy, and to provide, promote and facilitate high quality sustainable waste recovery and disposal infrastructure and technology in keeping with the EU waste hierarchy subject to economic and technical feasibility and environmental assessments.

WM P4: Seek the provision of adequately sized public recycling facilities in association with new commercial developments and in tandem with significant change of use / extensions of existing

commercial developments where appropriate.

WM P5: Require the appropriate provision for the sustainable management of waste within developments, including the provision of facilities for storage, separation and collection of waste.

WM P6: Ensure that all waste that is disposed of by private waste companies is done so in compliance with the requirements of the Environmental Protection Agency and the Waste Management Legislation and in accordance with the Planning Code.

6.6.7 Waste Management Infrastructure – Objectives

It is an objective of the Council to:

WM O1: Implement the provisions of the Southern Region Waste Management Plan 2015-2021, and any updates thereto during the life of this Plan, subject to compliance with the Habitats Directive and normal planning and environmental considerations.

WM O2: Continue to rehabilitate the former Powerstown landfill site and following completion of these works to accommodate an appropriate end-use that is compatible with the local environment.

WM O3: Implement the Litter Management Plan 2021-2023 and updates during the life of this Plan.

WM O4: Use statutory powers to prohibit the illegal deposit and disposal of waste, refuse and litter, and to authorise and regulate waste disposal within the

County in an environmentally sensitive manner.

WM O5: Implement the legislative provisions in relation to historic landfill sites in the County and to undertake risk assessments where required and any subsequent remedial measures where necessary.

6.7 Energy Infrastructure

The supply and distribution of electricity and gas infrastructure throughout County Carlow is an important factor in accommodating and promoting economic growth and employment, in attracting investment, and in the creation of sustainable communities. The Council will therefore continue to work alongside key energy providers in facilitating the future development of electricity and gas networks throughout the county.

The Council is cognisant of National Policy which seeks to promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050. In this regard, the availability of supporting infrastructure can facilitate or constrain renewable energy developments. The type, scale, and location of installations will depend on the proximity to the required infrastructure and the available capacity. Key supports include the national electricity grid and gas infrastructure.

6.7.1 Electricity

Eirgrid is the state-owned company with responsibility for the safe, secure, and reliable transmission of electricity in the Republic of Ireland. They operate and develop the national high voltage electricity transmission grid, while ESB Networks is responsible for carrying out maintenance, repairs, and

construction on the grid. Wholesale electricity is transported on the grid from generation stations to where it is needed, using high-voltage lines at 110 kV, 220 kV and 400 kV. The grid brings energy to heavy industry and high-tech users and supplies the distribution network operated and maintained by ESB Networks, which powers every electricity customer in the country.

Map 6.1 shows the existing substations and the overhead electricity line network in the County.

EirGrid's grid development strategy, GRID25, is designed to ensure that the transmission network has the capacity to provide for growth in electricity demand between now and 2025 (this strategy is being updated and will be replaced by a new grid/transmission strategy plan). The Strategy states that the capacity of the bulk of the transmission system will need to be doubled by 2025. In terms of the southeast region, the Strategy states that the demand for electricity is to increase by over 45% by 2025. The Council will support the reinforcement of the electricity transmission grid to improve energy supply to the County.

6.7.2 Gas

The natural gas network in Ireland is under the remit of Gas Networks Ireland (GNI) and provides much of the country with a cleaner, more sustainable alternative to coal, peat and oil for heat and power. Natural gas can assist in the connection of variable renewable generation to the grid, acting as a back-up fuel. Carlow is connected to the gas transmission network in Ireland. The gas transmission grid in the county is identified on Map 6.1.

Gas Networks Ireland (GNI) has a strategic plan to achieve 20% Renewable Gas on the network by 2030¹. Renewable gas is a carbon-neutral source of energy, with zero emissions. To achieve this target, GNI are currently working to introduce renewable gas to Ireland through the construction of injection facilities along the existing network. There is potential to produce renewable biogas within Carlow using on-site or off-site anaerobic digestion (AD) at farms or industrial facilities. The intention would be that the biogas would be purified to natural gas standard at the AD site and collection logistics would be in place to transport the renewable gas to Central Grid Injection (CGI) facilities along the network².

Compressed Natural Gas (CNG) is an initiative that is particularly suitable for use in commercial vehicles. It is a proven alternative to diesel or petrol and reduced costs and carbon emissions.

6.7.3 Energy Infrastructure – Policies

It is the policy of the Council to:

EI P1: Support and facilitate the reinforcement and development of enhanced energy infrastructure, and associated networks, to serve the existing and future needs of the County and Region. This will include the delivery of the necessary integration of transmission network requirements facilitating linkages of renewable energy proposals to the electricity and gas transmission grid, in a sustainable and timely manner, subject to proper planning and environmental considerations.

¹ The Future of Renewable Gas in Ireland (gasnetworks.ie)

² <https://www.gasnortworks.ie/corporate/company/our-commitment/environment/renewable-gas/>

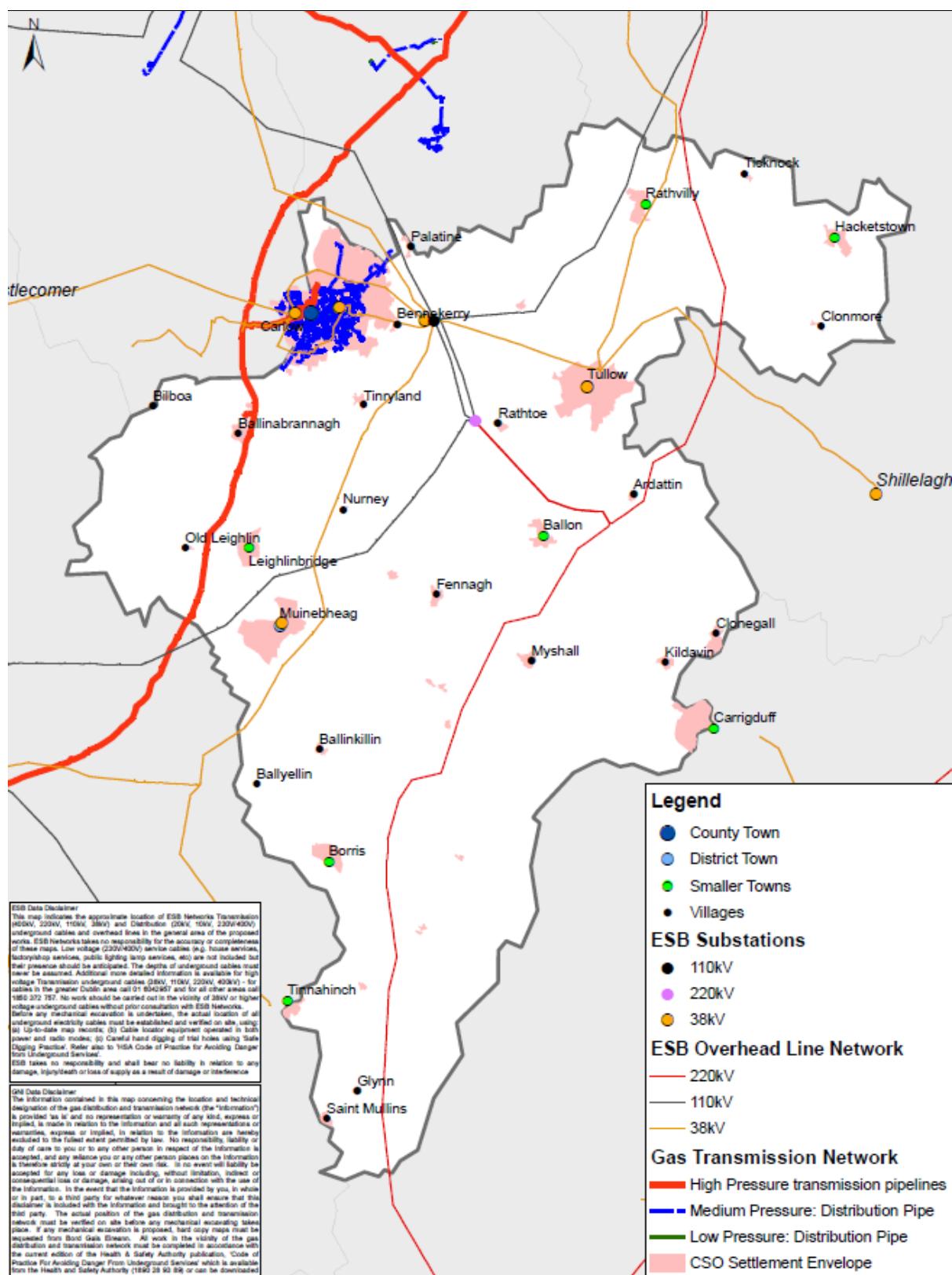
EI P2: Ensure that development proposals for energy transmission and distribution infrastructure follow best practice with regard to siting and design. Proposed high voltage overhead lines shall as far as possible seek to avoid areas of sensitivity. Where avoidance is not possible, full consideration shall be given to undergrounding the lines where technically feasible, economically viable and environmentally appropriate.

EI P3: Require the under-grounding of electrical cables within new residential, commercial or civic developments. Where existing, and proposed high voltage lines traverse new residential, commercial or civic developments, these should be re-located under-ground where technically feasible.

EI P4: Support statutory and other providers of national electricity and gas infrastructure by protecting strategic route corridors from encroachment by development that might compromise the provision of energy networks.

EI P5: Require in all new developments, that multiple services are accommodated in shared strips underground and that access covers are shared, whenever possible.

EI P6: Support the development of renewable gas production in the County at farms or industrial facilities to increase the percentage of locally recovered biogas into the national gas network through injection.



Map 6.1: Electricity and Gas Networks in County Carlow

6.8 Information and Communications Technology

Telecommunications investment is essential for furthering the social and economic development of County Carlow. The importance of advanced communications infrastructure is recognised for an information-based society, and as a key support for business, education and research. The RSES supports the development of a Smart City and Smart Region (RPO 13 and 134) involving a systematic integration of information and communication technologies (ICT) in planning, design, operations and management. Intensive digitisation of telecommunications offers a competitive advantage in attracting economic development and investment and contributing to sustainability goals by facilitating more flexible working arrangements, enabling people to work and communicate remotely. To this end, the need to build new infrastructure to provide increased capacity, improve the quality of coverage and to meet the demand for services is recognised. Carlow County Council acknowledges the importance of telecommunications, particularly broadband telecommunications, in terms of capitalising on investment opportunities and will encourage the further co-ordinated and focused development and extension of telecommunications infrastructure including broadband connectivity in the county, as a means of improving economic competitiveness.

6.8.1 Broadband

The implementation of the National Broadband Plan is the responsibility of the Department of Communications, Climate Action and Environment. In 2012, the National Broadband Plan entitled “Delivering a Connected Society - a National Broadband

Plan for Ireland” was published. This initiative seeks to deliver high-speed broadband to all premises in Ireland. The National Broadband Plan targets state intervention to areas not covered by commercial investment. In November 2019, the European Commission approved, under EU State aid rules, €2.6 billion of public support for the Irish National Broadband Plan. As of 2020, there are 8,088 premises (29% of total premises) in the county without access to high speed broadband. Carlow Town has a Metropolitan Area Network (MAN) which was funded under the National Development Plan and through the European Regional Development Fund. There are many different retail service providers using the MAN to provide internet connectivity throughout the County. These operators do not have any proprietary network in the towns and completely base their local strategies on the MANs. €32m will be invested building the national broadband plan in County Carlow. The indicative build start for the Carlow areas is early 2021 with the area ready for end user orders in Q3 2021. In the short term eight broadband connection points in the intervention areas have been identified in County Carlow with two primary schools prioritised for connection points in 2021.

6.8.2 Digital Strategy

Carlow County Council has adopted a Local Digital Strategy. This Digital Strategy was developed with a vision to advance the broadband and digital infrastructure in County Carlow, so that the citizens of Carlow can leverage the full potential that digital presents. Embracing the full range of opportunities that a digitally enabled society provides will allow the further development of the digital services available from Carlow County Council, advance our citizens digital skills, improve our community engagement and support our County’s digital economy.

The fundamental goal of the strategy is to maximise the benefits of digital transformation for the enhancement of our society and economy.

The Digital Strategy is based upon a number of core objectives with a clear roadmap for implementation.

The Strategy prioritises 4 key pillars:

- Digital Infrastructure
- Digital Economy
- Digital Services

The benefits of high-speed broadband

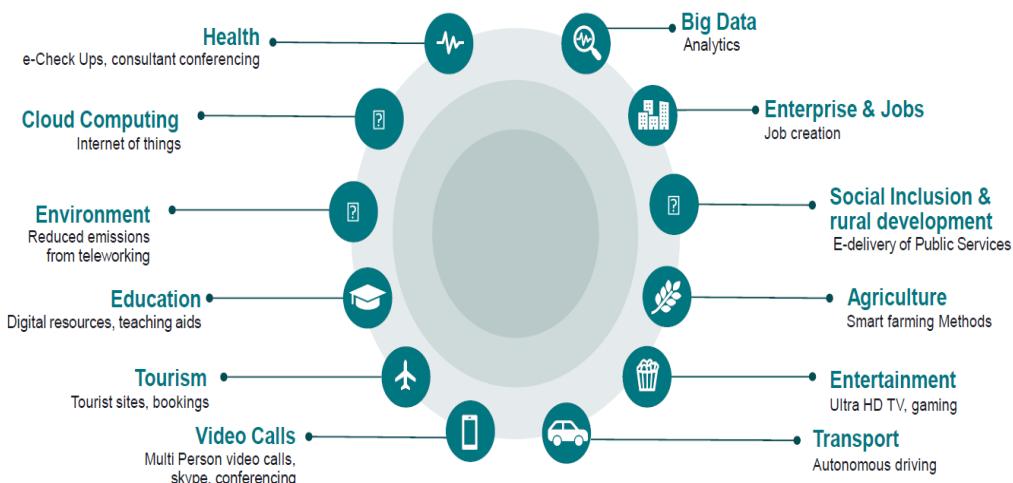


Fig 6.1 Benefits of High-Speed Broadband (Source : NBI)

6.8.3 Telecommunications Support Structures and Antennae

An efficient telecommunications system is important in the development of the economy. The deregulation of the industry has brought choice and competition but has given rise to duplication and overprovision of certain facilities. The Council will have regard to the guidelines issued by the Department of the Environment, Heritage and Local Government, 'Planning Guidelines for Telecommunications Antennae and Support Structures' (1996) and

- Digital Communities and eCitizens

These four core pillars identify areas where the strategy needs to focus. The actions of the Digital Plan will be continually monitored and updated.

Circular Letter PL 07/12. Carlow County Council will strive to achieve a balance between facilitating the appropriate provision of telecommunications services in the interests of social and economic progress and sustaining residential amenities, visual amenity and protection of the landscape.

6.8.4 Information and Communications Technology – Policies

It is the policy of the Council to:

- IC P1: Promote and facilitate the sustainable development of a high-quality ICT network including broadband and other technologies throughout the County in order to achieve balanced social and economic development, whilst protecting the amenities of urban and rural areas.
- IC P2: Support the co-ordinated and focused development and extension of broadband infrastructure including the delivery of the National Broadband Plan throughout the County.
- IC P3: 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 and any subsequent revisions along with Circular PI 07/12 on Telecommunications Antennae and Support Structures.
- IC P4: Require co-location of antennae support structures and sites where feasible. Where new structures are proposed operators will be required to submit documentary evidence as to the non-feasibility of a shared co-location option.
- IC P5: To require best practice in both siting and design in relation to the erection of communication antennae and support infrastructure and to ensure that the siting of such infrastructure seeks to minimise and / or mitigate any adverse impacts on communities, public rights of

way and the built or natural environment.

- IC P6: Protect areas of significant landscape importance, within or adjoining the curtilage of protected structures, within the setting of archaeological sites or within Natura 2000 sites from the visual intrusion of telecommunication infrastructure that would have a serious impact on the visual amenity of these sensitive sites and locations.
- IC P7: To require that ducting for broadband fibre connections to be provided during the installation of services, in all new commercial and residential schemes and during the carrying out of any work to road or rail lines.

6.8.5 Information and Communications Technology – Objective

It is an objective of the Council to:

- IC O1: Support the implementation of a Digital Strategy for the County and seek investment for actions identified therein.

6.9 Environmental Management

Environment Management is necessary in ensuring health and well-being and in safeguarding the environment for future generations.

6.9.1 Water Quality

Water quality is a key issue that affects everybody, and its protection is the responsibility of all sections of society. Ensuring that our local natural water bodies are clean and well protected is critically important to our health and wellbeing. A healthy catchment provides high quality drinking water and supports local livelihoods such as agriculture, food production, tourism and water based recreational activities (walking, swimming, angling and water sports). It also sustains and supports water dependent habitats and species (plants, animals, fish and insects) that depend on clean, healthy waters to survive.

6.9.2 Water Framework Directive

The EU Water Framework Directive (WFD) provides the legal framework to protect and enhance the status of aquatic ecosystems, prevent their deterioration and ensure long term, sustainable use of water resources. The WFD sets out the strategic response to the threat of pollution. Its four objectives are:

- Prevent further deterioration of water quality;
- Restore ‘good’ status of water quality;
- Reduce chemical pollution of water sources;
- Achieve protected area objectives.

6.9.3 National River Basin Management Plan 2018-2021

The provisions of the WFD are implemented through a River Basin Management Plan (RBMP). The National RBMP 2018-2021 sets out the actions that Ireland will take to improve water

quality and achieve ‘good’ ecological status in waterbodies (rivers, lakes, estuaries and coastal waters) by 2027.

The National River Basin Management Plan summarises the significant pressures where waterbodies are at risk of not meeting Water Framework Directive objectives. Figure 6.2 shows the frequency of significant pressures on “At Risk” water bodies. While agriculture is the most prevalent pressure, it is also the largest land use. The significant pressures impacting on the 1,460 water bodies that are At Risk of not meeting their objectives include agriculture (53%), hydromorphology (24%), urban wastewater (20%), forestry (16%), domestic wastewater (11%), urban runoff (9%), peat (8%), extractive industry (7%) and mines and quarries (6%).

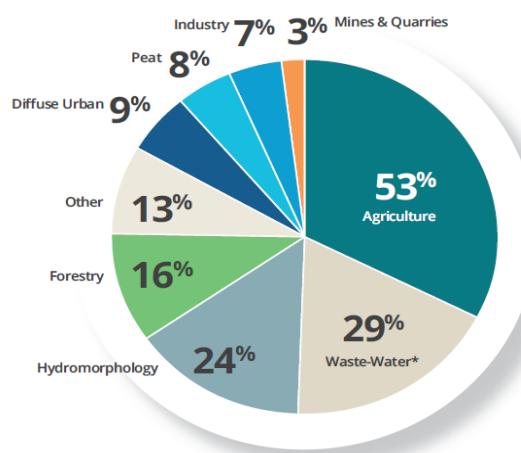


Fig 6.2 Significant Pressures on At Risk Water Bodies

Water quality trends for water bodies (rivers, streams, lakes, etc) nationally show a net decline of 4.4% over the period 2013-2018.

6.9.4 Water Quality County Carlow

The latest EPA report ‘Water Quality in Ireland’ was published in December 2019. In County Carlow the current position is recorded as follows:

- High Status: 1 waterbody
- Good Status: 15 waterbodies

- Moderate Status: 21 waterbodies
- Poor Status: 4 waterbodies

The aim is to protect water bodies with ‘high’ and ‘good’ status and to work towards achieving ‘good’ status for the remaining water bodies by 2027. A targeted approach is being taken focusing on identified risk areas (catchments) known as Priority Areas for Action. The targeted catchments in County Carlow include all or part of the following rivers:

• Slaney	• Mountain
• Burren	• Dinin
• Dereen	• Lerr
• Derry	

The Council will work with all relevant stakeholders including Irish Water, the EPA, Inland Fisheries, Forestry Services, Teagasc, Local Authority Waters Programme and others to facilitate improvements in the ecological status of water bodies.

6.9.5 Blue Dot Programme

A network known as the Blue Dot Catchments Programme has been set up under the RBMP to support the protection of high status objective sites. These sites are waterbodies that are at pristine and near pristine condition, or have been at this status in recent years, and support important species such as Atlantic salmon, or support economic and recreational activities associated with unspoilt areas. These waterbodies across Europe are under significant threat.

There are two such areas within County Carlow; the headwaters of the River Burren and the headwaters of the River Clody. They require additional care, and developments in these areas need to reflect their sensitive nature. A targeted programme of measures is being developed for these waterbodies.

6.9.6 River Basin Management Plan

It is expected that the new River Basin Management Plan will be finalised in 2022. Currently selection of updated Priority Areas for Action is underway with all stakeholders, based on river risk assessments and status. The Plan will have implications for County Carlow in that additional sub-catchments will be included as Priority Areas for Action.

6.9.7 Water Quality- Policies

It is the policy of the Council to:

WQ P1: Support the implementation of the relevant recommendations and measures as outlined in the River Basin Management Plan 2018-2021, and any associated Programme of Measures, or any such plan that may supersede same during the lifetime of this Plan. Development proposals shall not have an unacceptable impact on the water environment, including headwaters, surface waters, groundwater quality and quantity, river corridors and associated habitats. The Council will support the application and implementation of a catchment planning and management approach to development and conservation. Site specific assessments to determine localised pressures / impacts may be required as part of the development management process.

WQ P2: Promote and comply with the environmental standards and objectives established for (i) bodies of surface water, by the European Communities (Surface Water) Regulations 2009 and (ii) groundwater, by the European Communities (Groundwater) Regulations 2010 or as may be amended during the period of this Plan.

WQ P3: Ensure that the Water Framework Directive, the River Basin Management Plan and any subsequent Water Management Plans or statutory guidance are fully considered throughout the planning process.

WQ P4: Encourage the use of catchment sensitive farming practices in order to meet Water Framework Directive targets and comply with the RBMP.

6.9.8 Water Quality- Objectives

It is an objective of the Council to:

WQ O1: Ensure through the implementation of the River Basin Management Plan, and any associated legislation, the protection and improvement of all drinking water, surface water and ground waters throughout the County.

WQ O2: Work with the Local Authority Waters Programme and other relevant State agencies to develop and implement the River Basin Management Plan 2018-2021, and any updates subject to compliance with the Habitats Directive.

WQ O3: Implement the Blue Dot Catchment network programme under the RBMP to protect and maintain the excellent ‘High’ status water bodies.

WQ P4: Promote and support locally led community initiatives aimed at improving local water quality standards subject to compliance with the Habitats Directive.

6.10 Flood Risk Management

Flooding is a natural phenomenon of the hydrological cycle and is one of the effects of climate change that can be anticipated. Impacts arising from flooding can be minimised with proactive landuse planning and sustainable management of catchments, identifying areas vulnerable to flooding and by taking measures to ensure development does not individually or cumulatively contribute to an increase in flood risk. Flood risk must be considered at all stages of the land use planning process and managed in an environmentally sensitive way. Table 6.1 outlines the key sources of flood risk in County Carlow.

Fluvial	Watercourse capacity is exceeded, or the channel is blocked and excess water spills from the channel onto adjacent floodplains.
Pluvial	Resulting from high intensity rainfall which exceeds the infiltration capacity of the ground or drainage system to absorb it.
Groundwater	Results when the level of water stored in the ground rises as a result of prolonged rainfall and flows out over the ground.

Table 6.1 Sources of flooding in Carlow

6.10.1 Flood Risk – Policy Context

The EU Flood Directive 2007/60/EC requires member states to carry out preliminary flood risk assessment of their river basins and coastal areas to identify areas where potential significant flood risk exists, prepare flood hazard and flood risk maps and prepare flood risk management plans for these areas. The Directive was transcribed into Irish law under EC (Assessment of Flood Risks) Regulations SI No. 122 of 2010. The OPW is the lead agency for flood risk management and is the national

competent authority for the EU ‘Floods’ Directive.

6.10.2 Catchment Flood Risk Assessment and Management CFRAM

The CFRAM programme commenced in Ireland in 2011. The programme delivers on core components of National Flood Policy and on the requirements of the EU Flood Directive. The CFRAM programme comprises three phases (i) Preliminary Flood Risk Assessment, (ii) CFRAM Studies and (iii) Implementation and Review.

The National Preliminary Flood Risk Assessment (PFRA), a requirement of the EU ‘Floods’ Directive, was undertaken in 2011 and completed in 2012. The PFRA was a national screening of flood risk to inform the identification of areas or communities at potentially significant flood risk. Targeted areas known as ‘Areas for Further Assessment’ (AFA) were the focus of the National Catchment-based Flood Risk Assessment and Management (CFRAM) Programme. AFAs required more detailed assessment to accurately assess the extent and degree of flood risk, and where significance of risk is confirmed, to develop where possible measures to manage and reduce risk. A review of the PFRA (2011) was completed in 2019 and targeted areas as per the PFRA in 2011 in County Carlow include Carlow Town, Tullow, Leighlinbridge and Tinnahinch (as part of Graiguenamanagh). The CFRAM management plans set out the long-term strategies and measures required to manage risks in these areas. Proposals have been drafted for a flood relief scheme in Graiguenamanagh-Tinnahinch and proposed schemes to augment existing works in Carlow and Leighlinbridge. The Council will actively work with the CFRAM Programme in the development and implementation of catchment-based strategies for the management of flood risk. CFRAM mapping and plans have informed the Strategic Flood Risk

Assessment which accompanies this Plan (Appendix III).

6.10.3 The Planning System and Flood Risk Management Guidelines

In 2009, the OPW and the Department of the Environment and Local Government (DEHLG) published Guidelines on flood risk management for planning authorities entitled The Planning System and Flood Risk Management - Guidelines for Planning Authorities. The Guidelines introduce mechanisms for the incorporation of flood risk identification, assessment and management into the planning process. Implementation of the Guidelines and as amended by DoECLG Circular PL 2/2014 is intended to be achieved through actions at the national, regional, local authority and site-specific levels and are a key consideration in the preparation of statutory land use plans and in the assessment of planning applications.

The core objectives of the Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water runoff;
- Ensure effective management of residual risks for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders;
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management;
- Substitute less vulnerable uses where avoidance is not possible; and

- Mitigate and manage the risk, where avoidance and substitution are not possible.

Flood zones are geographical areas within which the likelihood of flooding is in a particular range and they are a key tool in flood risk management within the planning process as well as in flood warning and emergency planning.

There are three types or levels of flood zones defined for the purposes of these Guidelines:

- Flood Zone A – where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);
- Flood Zone B – where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding); and
- Flood Zone C – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in zones A or B.

The Council will ensure the implementation of the DoEHLG/OPW Guidelines and DPECLG Circular PL 2/2014 (or any updated / superseded document) in relation to flood risk management in the County. A Strategic Flood Risk Assessment of the County has been carried out as part of this County Development Plan process (Refer to Appendix III).

6.10.4 Flood Risk Management – Policies

It is the policy of the Council to:

- FR P1: Support, in co-operation with the OPW the implementation of the EU Flood Risk Directive (2007/60/EC) on the assessment and management of flood risks, the Flood Risk Regulations (SI No. 122 of 2010) and relevant outputs of the South Eastern Catchment and Flood Risk Assessment and Management Study.
- FR P2: Carry out flood risk assessment for the purpose of regulating, restricting and controlling development in areas at risk of flooding and to minimise the level of flood risk to people, business, infrastructure and the environment through the identification and management of existing and potential future flood risk.
- FR P3: Ensure that all development proposals comply with the requirements of the Planning System and Flood Risk Management – Guidelines for Planning Authorities (DEHLG and OPW, 2009) and Circular PL2/2014 (or any amendments thereto), in particular through the application of the sequential approach and the Development Management Justification Test.
- FR P4: Require the submission of a Site-Specific Flood Risk Assessment (FRA) in areas at risk of flooding. The assessment shall be carried out by a suitably qualified and indemnified professional, shall be appropriate to the scale and nature of the risk to the proposed development and shall consider all sources of flooding. The FRA shall be prepared in accordance with the Planning System and Flood Risk Management - Guidelines for Planning Authorities and shall

address climate change, residual risk, avoidance of contamination of water sources and any proposed site-specific flood management measures.

- FR P5: To protect and enhance the county's floodplains and wetlands as "green infrastructure" which provides space for storage and conveyance of floodwater, enabling flood risk to be more effectively managed. Riparian buffer zones shall have regard to Policies contained in Section 10.7 of this Plan.
- FR P6: To ensure each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaptation as set out in the OPW Climate Change Sectoral Adaptation Plan Flood Risk Management.

6.10.5 Flood Risk Management – Objectives

It is an objective of the Council to:

- FR O1: Ensure that flood risk management is incorporated into the preparation of future statutory local area plans in accordance with the requirements of the Planning System and Flood Risk Management, Guidelines for Planning Authorities (DEHLG and OPW, 2009) and Circular PL2/2014, and any future updates of these guidelines.
- FR O2: Facilitate the provision of new, or the augmentation of existing flood defences and protective measures, where necessary including natural flood management measures where deemed appropriate and to support the implementation of proposed flood schemes while also seeking to ensure zoning or development proposals support and do not impede or prevent

the progression of these schemes subject to compliance with the requirements of the EU Habitats Directive, the protection of natural and built heritage and visual amenities.

- FR O3: Seek to ensure that where flood risk management works take place that the cultural and natural heritage of rivers, streams and watercourses are protected, and improved where possible.

6.11 Air Pollution

EU Directives set out air quality standards in Ireland and other member states for a wide variety of pollutants. The EPA is responsible for monitoring air quality in Ireland. An air quality station was commissioned in Carlow in 2018. Up to-date information – related to monitoring results, including the Air Quality Index for Health is available at www.epa.ie/air/quality. Currently Carlow has a 'good' air status.

The Council will seek to maintain good air quality standards through the integration of land use and planning, promoting measures which seek a reduction in fossil fuel-based energy sources and minimising the potential for adverse effects on air quality through the construction and operational phases of projects through the development management process.

6.11.1 Air Pollution - Policies

It is the policy of the Council to:

- AP P1: Promote the preservation of best ambient air quality compatible with sustainable development in accordance with the EU Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) and ensure that all air emissions associated with new developments are within Environmental

Quality Standards set out in the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011) or any updated/superseding documents.

AP P2: Require activities likely to give rise to air emissions (not licenced under separate legislation) to implement measures to mitigate impacts and to undertake air quality monitoring.

6.12 Noise Pollution

Noise control is governed by the Environmental Protection Agency Act 1992 and the Environmental Protection Agency Act (Noise) Regulations 1994 (S.I. No. 179 of 1994). The definition of environmental noise includes “noise which causes a nuisance or would endanger human health or damage property or harm the environment”. Noise, which is continuous, repeated, loud can have significant impacts on the quality of life of individuals, communities and the environment.

The planning authority will seek to guide the location of development and ensure compatibility between land uses and protect noise sensitive receptors. Pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life will be promoted through the development management process.

The Council has prepared a Noise Action Plan 2018 in respect of County Carlow in accordance with the requirements of Environmental Noise Regulations 2006 (S.I No. 140 of 2006) which give effect to the EU Directive 2002/49/EC relating to the assessment and management of noise. This is a strategic plan to address noise from major roads within the County with more than three million vehicles per annum. It excludes noise that is caused by the exposed person himself/herself, noise from domestic

activities, noise created by neighbours, noise at work places or noise inside means of transport. This Plan supports the implementation of the Carlow Noise Action Plan 2018-2023 (and any revisions thereto during the life of this Plan).

6.12.1 Noise Pollution - Policies

It is the policy of the Council to:

NP P1: Have regard to the provisions of the Environmental Protection Agency (EPA) Acts 1992 and 2003 and the Environmental Protection Agency Act (Noise) Regulations 1994 or any amendments thereto when assessing planning applications.

NP P2: Support and seek the implementation of the Carlow Noise Action Plan 2018 -2023 (and any revisions thereto during the life of this Plan).

NP P3: Regulate and control activities likely to give rise to excessive noise, other than those activities which are regulated by the Environmental Protection Agency.

NP P4: Ensure new development does not cause an unacceptable increase in noise levels affecting noise sensitive properties. Proposals for new development with the potential to create excessive noise will be required to submit a construction and/or operation management plan to control such emissions.

6.13 Light Pollution

The control of light pollution is important in the interests of nature conservation, residential amenity and energy efficiency. While adequate lighting is essential to a safe and secure environment, light spillage from excessive or poorly designed lighting is increasingly

recognised as a potential nuisance to surrounding properties, a threat to wildlife and can reduce the visibility of the night sky. Lighting columns and other fixtures can have a significant effect on the appearance of buildings and the environment and where proposals for new lighting require planning consent, the Planning Authority will ensure that they are carefully and sensitively designed. Lighting fixtures should provide only the amount of light necessary for the task/use/activity proposed and should shield light given out in order to avoid creating glare or emitting light above the horizontal plane.

6.13.1 Light Pollution - Policies

It is the policy of the Council to:

- LP P1: Ensure that the design of external lighting schemes minimises the incidence of light spillage or pollution in the immediate surrounding environment and has due regard to the residential amenity of surrounding areas and the need to mitigate adverse impacts on sensitive fauna and protected species.
- LP P2: Require the use of energy efficient lighting in all new development proposals.
- LP P3: Seek to ensure that the use of energy efficient (LED) lighting, both in relation to planning applications and local authority projects, minimises any significant adverse effects on biodiversity with the use of appropriate lighting in sensitive areas.

6.14 Major Accident Directive

The EU Directive (96/82 EC) on the control of major accidents hazards, commonly referred to as the SEVESO II Directive, was adopted in 1999. The Directive is implemented in Ireland through the Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (COMAH Regulations). The Directive aims to prevent accident hazards from dangerous substances and to limit the consequence of such accidents through the following measures:

- The siting of new Major Accident Hazard sites.
- Modification of existing Major Accident Hazard sites.
- Development in the vicinity of a Major Accident Hazard site which by virtue of its type or siting is likely to increase the risk or consequence of a major accident.
- Site specific emergency planning by the local authority and site operator.

A Major Accident Hazard Site (SEVESO Site) is a site where the occupier has notified the Health and Safety Authority (HSA) that they meet a specified threshold for quantities of hazardous substance as outlined in the above-mentioned Regulations i.e. sites defined by COMAH Regulations as '*locations where significant quantities of dangerous substances are stored*'. The HSA provides advice to Planning Authorities, where appropriate, in respect of planning applications for development within a certain distance of the perimeter of these sites. The Council is required to seek technical advice from the HSA in relation to any planning application directly pertaining to a SEVESO site or within "consultation distance" of these establishments. At present there are no SEVESO sites within County Carlow.

The HSA approach to Land-use Planning is set out in the document '*Policy & Approach of the*

Health and Safety Authority to COMAH Risk-based Land-use Planning', which is available to download at

https://www.hsa.ie/eng/Your_Industry/Chemicals/Legislation_Enforcement/COMAH/Land_Use_Planning/

6.14.1 Major Accident Directive – Policies

It is the policy of the Council to:

MA P1: Have regard to the provisions of the Major Accidents Directive (European Council Directive 2012/18/EU) and any regulations under any enactment giving effect to that Directive, and the technical advice of the Health and Safety Authority (HSA) in relation to any identified SEVESO sites in the county during the life of this Plan.

MA P2: Have regard to the provisions of the Major Accident Directive (EC Directive 2012/18/EU), including any regulations under any enactment giving effect to that Directive, and to the technical advice of the Health and Safety Authority (HSA), in relation to any identified SEVESO sites in the county during the lifetime of this Plan and to the control of development with respect to:

- The siting of Major Accident Hazard sites.
- The modification of an existing Major Accident Hazard site.
- Specified development in the vicinity of a Major Accident Hazard site.