

## Chapter 9: Sustainable Environmental Infrastructure and Flood Risk

## 9.1 Introduction

The integration of land-use planning with infrastructure delivery is essential to achieving sustainable development. Ireland's National Planning Framework (NPF) 2018 requires planning authorities to co-ordinate the zoning of land for development purposes with planned infrastructure and services, and identifies strategic projects to enhance water supply and waste water treatment capacity.

The improvement of sustainability in terms of energy, water, waste management and resource efficiency are key future growth enablers for Dublin's development. Dublin City Council is committed to delivering sustainable infrastructure and services, within its statutory remit, which will enhance the quality of the City's environment and also facilitate sustainable economic and housing development.

The policies and objectives in this chapter are intended to address a broad range of supporting infrastructure and services, providing for improvements in water quality and water services, sustainable waste management, greater energy security and efficiency, enhanced digital connectivity, and a more holistic and nature-based approach to flood risk and surface water management, all while safeguarding environmental quality and providing for climatic resilience. The application of these policies and objectives will ensure that the growth and development of the City is integrated with appropriate provision of sustainable environmental infrastructure, thereby contributing to wider climate action and environmental goals and targets.

## 9.2 Achievements

The City Council has been working in partnership with other local authorities and organisations in the region to improve all aspects of our environment. Over the last number of years, many projects have been completed or undertaken:

- In 2019, the Council published a Climate Change Action Plan 2019-2024 for the City which outlined projects to improve resource management, measures to deliver flood resilience and actions to improve water quality and encourage water conservation.
- In 2019, Irish Water secured consent for a major upgrade to the Ringsend Waste Water Treatment Plant (WWTP) to enable the existing plant to meet wastewater treatment requirements. This strategic infrastructural project for the City will support ongoing population and industrial growth.
- In 2018, the City Council worked with the Office of Public Works (OPW) to complete a Catchment Flood Risk Assessment and Management (CFRAM) Programme for the major rivers and coastal areas of Dublin City. This work informed the implementation of flood protection and alleviation measures on the Rivers Santry, Dodder, Poddle and Camac, together with flood relief schemes at Clontarf, the South Campshires and Sandymount.

- The Council has undertaken a number of projects under the River Basin Management Plan for Ireland 2018-2021 and Eastern River Basin District to improve water quality within the City's waterbodies. Of particular note is the Santry River Project, which is being progressed as part of a URDF-funded pilot to restore the river to a more natural state.
- The Council is supporting the objectives of the Water Framework Directive (WFD) to improve the status of the City's waterbodies by adopting a much more proactive approach to managing surface-water and flood risk through sustainable drainage and nature-based solutions, requiring new developments adjacent to the River Liffey to incorporate these solutions, together with green infrastructure features, in order to absorb rainfall.
- The Council's commissioning of the Dublin Waste to Energy Facility, which converts waste that cannot be reused or recycled into clean energy, has provided new localised infrastructure for the sustainable treatment and reuse of the City's waste products.
- The Council worked in partnership with the other Dublin local authorities to produce a combined Noise Action Plan for the Dublin Agglomeration 2018-2023 which sets out measures to mitigate excessive environmental noise and to protect areas of good acoustic quality.
- In 2019, the Council launched a real-time air and noise monitoring website (<https://dublincityairandnoise.ie/>) which gives the public real time access to data for the City and provides an evidence-base for the development of policy to address local air quality issues.
- In 2021, the Council became the first local authority in Ireland to establish a Telecoms Unit to harness the potential of Dublin's digital economy, and have installed an open access ducting system and 5G technology testbed in the Dublin Docklands as part of the City's 'Smart Docklands' initiative.

### 9.3 Challenges

Meeting the increased demand for high-quality infrastructure and services will be an ongoing requirement as Dublin City grows and develops. The City is currently facing a range of infrastructural challenges:

- Ireland's energy sector will need to be adapted to embrace a more diverse range of low, zero-carbon and renewable energy sources in order to provide for a more environmentally sustainable, stable and indigenous energy supply. The provision of secure, resilient, decarbonised, and decentralised utilities which are integrated with population growth, city development and climate action objectives, will be a long term challenge for the City.
- Another core challenge for Dublin is the need to address existing pressure on the City's water supply and wastewater treatment infrastructure, and to align the

provision of critical water services with city growth targets, while also providing for environmental protection and climatic resilience.

- Climate change, rising sea levels and more frequent and severe rainfall events are contributing to greater flooding issues and putting the City's critical infrastructure at risk. It will be necessary to adapt the City's flood risk management response to address these issues.
- The strategic planning of surface water management will be required in order to reduce the volume of run-off, relieve overloading pressure on the drainage network, and protect water quality in the City's watercourses. This will necessitate the use and retrofitting of sustainable drainage solutions to manage surface water in place of hard grey solutions. It will also require the Council to address legacy issues around impermeable surfaces and sub-optimal standards of private drainage construction.
- The Council will need to balance the requirement to improve the status of the City's water quality with planned growth targets for Dublin, while also protecting and improving aquatic environments and water-dependent ecosystems through pollution control and restoration/ enhancement of the physical condition of the City's waterbodies.
- Improving the sustainability of waste management infrastructure and practices will be critical to maximising resource value in accordance with circular economy<sup>1</sup> principles, as will facilitating the safe and environmentally responsible reuse and redevelopment of contaminated brownfield sites throughout the City. The Council will need to continue to support innovation in waste management and reduction in order to enhance public health, economic wellbeing and environmental protection.
- The proactive management of the City's air quality and acoustic environment will require the Council to address the cross-sectoral factors which contribute to the City's air and noise pollution, such as high volumes of vehicular traffic.
- Balancing the increasing demand for deployment of digital connectivity infrastructure to support the digital economy/ future connectivity with the need for efficiency and co-ordination with other utility works will be an ongoing challenge for the City.

## 9.4 The Strategic Approach

The main strategic issues for the current plan period are identified as follows:

- Facilitating the provision of critical energy utilities and the transition to alternative, renewable, decarbonised and decentralised energy sources, technologies and

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<sup>1</sup> In a circular economy, waste and resource use are minimised; the value of products and materials is maintained for as long as possible through good design, durability and repair; and when a product has reached the end of its life, its parts are used again and again to create further useful products (Source: A Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025 (Government of Ireland)).

infrastructure, while delivering improved alignment between the City's energy use and energy generation.

- Aligning the settlement and economic elements of the core strategy with the efficient use and timely delivery of critical water supply and waste water infrastructure through ongoing consultation with Irish Water (IW). Supporting implementation of the IW Water Services Strategic Plan (2015) and key projects in order to maintain and improve existing services and service further growth.
- Managing the use of our water resources through active conservation and demand management measures.
- Enhancing the City's resilience to climatic risk and vulnerabilities through more nature-based and adaptive flood risk management, which is aligned with placemaking and delivers wider environmental benefits.
- Aligning the growth of development areas with strategic surface water management and encouraging the use of sustainable drainage systems and nature-based surface water management regimes.
- Ensuring the necessary management and protection of watercourses and waterbodies is fully integrated with climate action, land use planning and development management practices.
- Promoting and delivering more sustainable forms of waste management and improved waste education in the City in line with circular economy and 15-minute city principles. Minimising and preventing waste and maximising material recycling, reuse and re-purposing.
- Control of air pollution emissions at source through cross-sectoral policy responses in the areas of transport, land use, green infrastructure and energy production/ use.
- Proactive management of urban noise pollution sources through the Dublin Agglomeration Noise Action Plan 2018-2023.
- Supporting and co-ordinating the roll-out of telecoms and digital connectivity infrastructure and the shared use of the City's assets and ducting networks, in order to minimise time delays, cost, duplication and disruption.

## 9.5 Policies and Objectives

### 9.5.1 Water Supply and Wastewater

Providing safe, secure and resilient water services is of critical importance to facilitating public health, population and employment growth within Dublin City. National policy for the delivery and development of water and wastewater services is set out in the Water Services Policy Statement 2018 – 2025 (2018). Quality, conservation and future proofing are identified as the key policy objectives for the delivery of water and wastewater services up to 2025.

Irish Water (IW) is responsible for the provision of public water services and management of water and wastewater investments. The sustainable management of water is provided for

through capital investment in water services provision under the IW Water Services Strategic Plan (WSSP) 2015 and related Capital Investment Plans and Programmes. The 25-year plan outlines the status of Ireland's water services infrastructure, including current and future challenges, and identifies plan-led investment priorities to meet demand. The WSSP also provides the context for detailed implementation plans that address key water service areas such as water resource management, wastewater compliance, and sludge management.

The water supply and wastewater needs of Dublin are to be met by a series of planned Strategic Water Services Projects designed to enhance the City's water supply and increase wastewater treatment capacity in compliance with the Urban Waste Water Treatment and Drinking Water Directives. The phased upgrade of the Ringsend WWTP Project and Greater Dublin Drainage Project remain critical waste water infrastructure investment priorities in the short-to-medium term, while the Water Supply Project for the Eastern and Midlands Region (EMR) is identified as a critical longer term project to ensure resilience and security of supply. This project is due to be implemented under the IW National Water Resources Plan – Framework Plan (2021) which outlines how Irish Water intends to maintain the balance between the supply from water sources around the country and demand for drinking water over the short, medium and long-term. This Framework Plan is supported by the Regional Water Resources Plan: Eastern and Midlands (RWRP-EM) which will inform future capital investment and operational plans in Dublin City.

Climate change has been identified as a significant ongoing challenge to the sustainable management of water resources for Dublin City, in terms of both the capacity of waterbodies to assimilate wastewater discharges and the availability and security of water supply sources. Addressing the overloading of the City's drainage network, coupled with excessive water wastage, are central to sustainably managing the demand for water services in Dublin in line with the Water Quality and Water Services Infrastructure Climate Change Sectoral Adaptation Plan (2019). The City Council is actively working with IW to promote water conservation, control leakage, and to rehabilitate and upgrade the City's watermain infrastructure. Localised pressures on the City's sewerage system are being addressed through the proactive management of surface water inflows, the roll out of Drainage Action Plans, higher drainage infrastructure design standards and by requiring the separation of foul and surface water drains as part of all new developments.

#### It is the Policy of Dublin City Council:

##### S11 Support for Irish Water

To support and facilitate Irish Water in the provision of high quality drinking water, water conservation and drainage infrastructure, and to promote the ongoing upgrade and expansion of water supply and wastewater services to meet the future needs of the City and the Region.

**It is the Policy of Dublin City Council:**

<b>SI2</b>	<p><b>Integrating Water Services with Development</b></p> <p>To ensure that development is permitted in tandem with available water supply and wastewater treatment and to manage development, so that new schemes are permitted only where adequate capacity or resources exist or will become available within the life of a planning permission.</p>
<b>SI3</b>	<p><b>Separation of Foul and Surface Water Drainage Systems</b></p> <p>To require all new development to provide separate foul and surface water drainage systems.</p>
<b>SI4</b>	<p><b>Drainage Infrastructure Design Standards</b></p> <p>To require new private development sewers which are intended to connect to the public drainage system to comply with the requirements of the Greater Dublin Regional Code of Practice for Drainage Works and/ or Irish Water foul sewer specification (where applicable).</p>
<b>SI5</b>	<p><b>Safeguarding of Public Water Services Infrastructure</b></p> <p>To work in conjunction with Irish Water to safeguard existing water and drainage infrastructure by protecting existing wayleaves and buffer zones around public water service infrastructure.</p>
<b>SI6</b>	<p><b>Water Conservation</b></p> <p>To require all developments to incorporate best practice water conservation and demand management measures in order to promote water conservation by all water users, and minimise the pressure for water drawdown, wastage of water supply and reduced availability of water resources.</p>

**It is an Objective of Dublin City Council:**

<b>SIO1</b>	<p><b>Commitment to Working in Partnership with Irish Water</b></p> <p>To support Irish Water in the implementation of the Water Services Strategic Plan (2015) and National Water Resources Plan – Framework Plan (2021) for Ireland’s public water supplies and to work closely with Irish Water to facilitate the timely delivery of the public water services required to realise the core strategy growth targets of this plan in accordance with the Draft Water Services Guidelines for Planning Authorities (2018).</p>
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**It is an Objective of Dublin City Council:**

<b>SIO2</b>	<p><b>Wastewater Waste Treatment</b></p> <p>To have regard to the policies and objectives contained in Irish Water’s National Wastewater Sludge Management Plan (2016) and subsequent plans, and to support appropriate options for the extraction of energy and other resources from sewerage sludge.</p>
<b>SIO3</b>	<p><b>Irish Water Conservation Measures</b></p> <p>To work with Irish Water to reduce leakage in accordance with any forthcoming Regional Water Conservation Strategy.</p>

### 9.5.2 Urban Watercourses and Water Quality

The Water Framework Directive (WFD) is environmental legislation which aims to protect and improve water quality in support of ecology and the attainment of good status in our rivers, lakes, groundwater and transitional coastal waters by 2027. The WFD’s good ecological status objective applies to Dublin’s estuaries, coastal areas and rivers Liffey, Tolka, Dodder, Camac, Santry and Mayne together with their sub-catchments. The City’s rivers are currently not achieving a ‘good ecological status’ as per the WFD. Data from the 2013-2018 monitoring period indicates that their WFD status ranges from ‘moderate’ to ‘poor’, while the status of the City’s transitional waterbodies ranges from ‘good’ to ‘moderate’ with its coastal waterbody being classed as ‘good’.

Ireland is required to produce River Basin Management Plans (RBMP) under the WFD across three river basin planning cycles. The RBMP seeks to ensure WFD compliance through a catchment-based approach to the protection and enhancement of water quality, the shape and flow of water courses and their water-dependent ecosystems, improving their status and preventing their further deterioration. The 2018-2021 RBMP identifies activities and pressures on waterbodies nationally and sets out a programme of measures to address these at a more localised level. In Dublin City, pressures include contamination from surface water run-off; misconnections and urban waste water; culverting and other physical changes to historic river channels; and, increases in impervious surface cover due to urbanisation. The key risks to water quality arising from climate change are identified as the movement of pollutants following increased rainfall and flooding, together with reduced dilution of contaminants in water bodies at low flow.

The Council has a role to play in co-ordinating and tracking the implementation of current, Draft and future 3<sup>rd</sup> cycle RBMP measures at regional and local level, and in making sure they are fully considered throughout the physical planning process to ensure alignment between the development plan, WFD and RBMP. It is anticipated that forthcoming Section 28 Guidance on WFD Assessment and Sustainable Urban Drainage will assist planning



authorities in addressing these water quality considerations as part of the planning and development decision-making process. In the interim, regard will be had to the government's best practice guidance document, Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas (December 2021).

The Council is currently examining the potential for strategic management, restoration, and enhancement of the City's watercourses as a policy response to the WFD, the Local Government (Water Pollution) Act 1977 (as amended), the RBMP, and national urban renewal policies. The Council is exploring the potential of using green infrastructure and land-use management to mitigate pollution and address water quality and flood risk issues. For example, initiatives such as the Santry River Restoration and Greenway project use green infrastructure to manage and treat surface water run-off in order to protect water quality and improve the status of the river. Work is also underway on a Flood Alleviation Scheme (FAS) to review and improve flood protection on the Camac River catchment, with opportunities for river corridor restoration being explored as part of this initiative.

#### River Corridor Restoration

River Corridor Restoration seeks to support the restoration of natural processes and historical functioning of a river as far as possible, thereby improving its water quality and ecology in line with the requirements of the WFD, RBMP and climate change adaptation. Providing more 'room for the river' is central to the concept.

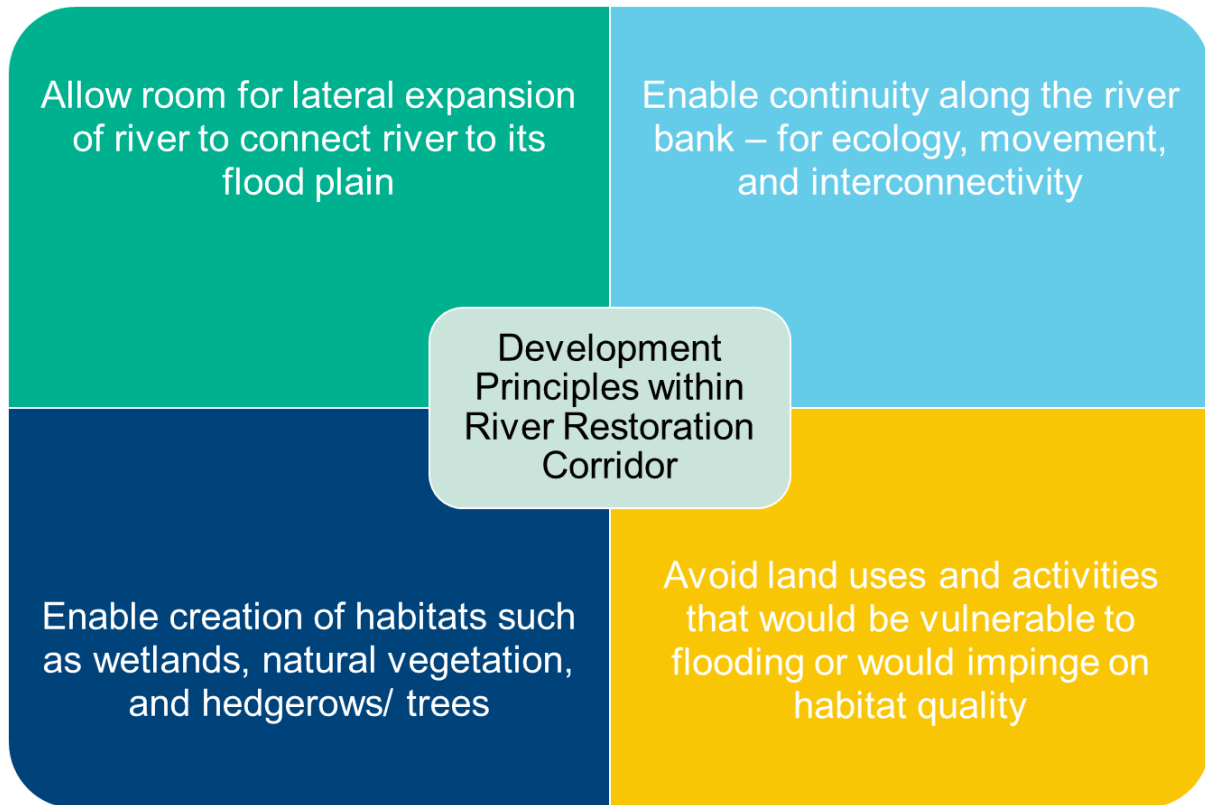
It is the objective of the Council to prepare river corridor restoration strategies for the City's watercourses and to develop a long term, integrated and interdisciplinary approach to linking the restoration of the City's rivers and tributaries to land use planning, urban regeneration, climate adaptation and the provision of ecosystem services such as flood management, habitat provision and pollution control. This will be done in co-operation with stakeholders including local communities, neighbouring local authorities, and government agencies (EPA, OPW, IFI, etc.).

Forthcoming national guidance on nature-based sustainable urban drainage and WFD assessment of plans and projects will provide a strong policy basis for nature-based water management and will support the advancement of the Council's River Restoration Strategies.

In the interim, progressive restoration within river corridors is to be achieved by managing the nature and extent of development adjoining the City's rivers by applying a recommended minimum setback distance from all rivers in line with Planning for Watercourses in the Urban Environment Guidance (2020) produced by Inland Fisheries Ireland and the River Hydromorphology Assessment Technique (RHAT) under the Water Framework Directive.

A more extensive set-back distance based on a hydromorphological assessment may be required for larger scale sites along the River Camac, to safeguard the restoration integrity of specific river reaches. Development principles in relation to river restoration corridors are summarised in Figure 9-1.

**Figure 9-1: Development Principles within River Restoration Corridors**



In the longer term, the Council is seeking to prepare restoration strategies/ masterplans for the City's rivers and to deliver river restoration projects on flagship sites and within designated Strategic Development and Regeneration Areas.

It is the Policy of Dublin City Council:	
<b>SI7</b>	<p><b>Water Quality Status</b></p> <p>To promote and maintain the achievement of at least good status in all water bodies in the City.</p>
<b>SI8</b>	<p><b>Physical Condition of Waterbodies</b></p> <p>To promote the protection and improvement of the aquatic environment and water-dependent ecosystems through proactive discharge and emissions management, and through the enhancement of the physical condition of waterbodies.</p>
<b>SI9</b>	<p><b>Groundwater Pollution</b></p> <p>To promote the progressive reduction of pollution of groundwater.</p>
<b>SI10</b>	<p><b>Managing Development Within and Adjacent to River Corridors</b></p> <p>To require development proposals that are within or adjacent to river corridors in the City (excluding the Camac River) to provide for a minimum set-back distance of 10-15m from the top of the river bank in order to create an appropriate riparian zone. The Council will support riparian zones greater than 10 metres depending on site-specific characteristics and where such zones can integrate with public/communal open space.</p>
<b>SI11</b>	<p><b>Managing Development Within and Adjacent to Camac River Corridor</b></p> <p>To manage all development within and adjacent to the Camac River Corridor in a way that enhances the ecological functioning and water quality of the river and aligns with the principles for river restoration. All development shall provide for a minimum set-back distance of 10-25m from the top of the river bank depending on site characteristics. Large development sites in excess of 0.5ha should provide a minimum set-back of 25m from the top of the river bank where informed by a hydromorphological study.</p>

## It is the Policy of Dublin City Council:

S112	<b>River Restoration in Strategic Development and Regeneration Areas</b>
	<p>To provide opportunities for enhanced river corridors in the following Strategic Development and Regeneration Areas (SDRAs) in order to harness significant opportunities for river restoration where feasible:</p> <ul style="list-style-type: none"> <li>▪ SDRA 1 Clongriffin/ Belmayne and Environs</li> <li>▪ SDRA 3 Finglas Village Environs and Jamestown Lands</li> <li>▪ SDRA 4 Park West/Cherry Orchard</li> <li>▪ SDRA 5 Naas Road</li> <li>▪ SDRA 6 Docklands</li> <li>▪ SDRA 7 Heuston and Environs</li> <li>▪ SDRA 9 Emmet Road</li> <li>▪ SDRA 10 North East Inner City</li> <li>▪ SDRA 16 Oscar Traynor Road</li> </ul>

## It is an Objective of Dublin City Council:

SIO4	<p><b>River Basin Management Plan</b></p> <p>To implement the EU Water Framework Directive through the implementation of the appropriate River Basin Management Plan and Programme of Measures and individual river restoration strategies where available.</p>
SIO5	<p><b>River Basin Management Plan</b></p> <p>To take into consideration the River Basin Management Plan and Programme of Measures when considering new development proposals.</p>
SIO6	<p><b>Groundwater Protection</b></p> <p>To protect ground water resources in Dublin City and to implement the recommendations contained in any Groundwater Protection Scheme prepared under EU Ground Water Directives.</p>
SIO7	<p><b>River Restoration Flagship Projects</b></p> <p>To support the delivery of flagship river restoration projects where restoration measures can be comprehensively implemented, including the Camac River Corridor. This will include opportunities arising from the regeneration/ development of strategic land banks.</p>

**It is an Objective of Dublin City Council:**

<b>SIO8</b>	<p><b>River Restoration Strategies/ Masterplans</b></p> <p>To prepare river-specific restoration strategies/ masterplans for the City's rivers and their tributaries in order to create a comprehensive, collaborative and integrated catchment management planning approach to improving the river corridor which addresses water quality, flooding, hydromorphology, ecology, biodiversity, heritage, amenity and tourism.</p>
<b>SIO9</b>	<p><b>Planning for Surface Water Management</b></p> <p>To undertake Surface Water Management Plans for each river catchment and as part of this, include a study of relevant zoned lands within the City in order to ensure that sufficient land is provided for nature-based surface water management, SuDS and green infrastructure.</p>

**9.5.3 Flood Management**

Flooding in Dublin City has been addressed to date through a variety of structural and non-structural measures, including a range of investment programmes and a number of flood defence/ alleviation projects. Spatial planning and land use management have also had a key role to play with respect to flood risk management, in particular, in ensuring that future development avoids or minimises increases in flood risk. In line with current flood risk management practice, the City Council has increased co-ordination and capacity building and adopted a flood risk prevention (SFRA/ Flood Risk Management Guidelines as framework for forward planning and development management), protection (Flood Relief Schemes), preparedness (Flood Warning / Emergency Response) and resilience approach.

The Council is currently examining ways to more effectively manage the potential impacts of climate change on flooding and flood risk in line with the Flood Risk Management Climate Change Sectoral Adaption Plan (2019). In response, the Strategic Flood Risk Assessment (SFRA) for the development plan has considered climate change and resultant increases in rainfall intensity, changed rainfall patterns, and increased risk from fluvial and coastal flooding.

The Council is actively working to ensure the long term management of flood risk by implementing projects and programmes that align with the EU Floods Directive and WFD. The Council is also working in close partnership with the Office of Public Works (OPW), the lead organisation for flood risk management in Ireland, to deliver the objectives of the Catchment Flood Risk Assessment and Management (CFRAM) Programme for the major rivers and coastal areas of Dublin City. The CFRAM Studies generated several outputs including:

- Flood maps indicating modelled flood extents and flood zones for a range of flood events of annual exceedance probability (AEP) (fluvial and coastal).
- Flood Risk Management Plans (FRMPs) to manage flood risk within the relevant river catchment.

These comprehensive flood maps and FRMPs inform decision making for flood management and flood risk reduction and in turn, inform the approach taken to the City's spatial planning, land use and development management. The resulting CFRAM flood maps, which identify areas at risk of flooding under current and future scenarios, and FRMPs, which identify specific flood relief schemes and projects designed to take account of potential future climate change impacts, have been incorporated into the SFRA that informed the preparation of the development plan. The SFRA has been prepared in accordance with the Planning System and Flood Risk Management Guidelines (2009) to provide a broad (wide area) assessment of all types of flood risk to inform strategic land-use planning decisions.

Natural flood risk mitigation or Sustainable Drainage Systems (SuDS) such as integrated wetlands, enhanced green infrastructure and nature-based solutions, offer an alternative to traditional hard-engineered solutions such as flood defence walls. These systems play a role in climate adaptation and mitigation responses to achieve flood resilience by reducing and managing run-off from new developments to surface water drainage systems, minimising flood risk downstream, improving water quality and contributing to local amenities.

In 2013, the OPW published the Irish Coastal Protection Strategy Study (ICPSS) which provided strategic coastal flood and erosion hazard maps for the national coastline. This was updated by the Irish Coastal Wave and Water Level Modelling Study (ICWWS) 2018, and the National Coastal Flood Hazard Mapping, 2021. These studies have informed local authority assessment of potential hazards associated with future development, have guided decision making on local coastal planning and development, and have facilitated the development of appropriate plans and strategies for the sustainable management of coastlines. Regard will also be had to the forthcoming recommendations of the government's Inter-Departmental Group on Coastal Change Management. Whilst the ICPSS did not identify coastal erosion as a critical threat to Dublin City, the Council will continue to work with the OPW and other agencies on an integrated and precautionary approach to managing the projected impacts of coastal change (caused by increasing development pressures and erosion, sea level rise and increased storm frequency linked to climate change) on the City's coastal communities, infrastructure, heritage and environment.

## It is the Policy of Dublin City Council:

SI13	<p><b>Minimising Flood Risk</b></p> <p>To minimise the flood risk in Dublin City from all other sources of flooding as far as is practicable, including fluvial, coastal, reservoirs and dams, the piped water system, and potential climate change impacts.</p>
SI14	<p><b>Strategic Flood Risk Assessment</b></p> <p>To implement and comply fully with the recommendations of the Strategic Flood Risk Assessment prepared as part of the Dublin City Development Plan 2022-2028, including all measures to mitigate identified climate change and flood risks, including those recommended under Part 3 (Specific Flood Risk Assessment) of the Justification Tests, and to have regard to the Flood Risk Management Guidelines (2009), as revised by Circular PL 2/2014, when assessing planning applications and in the preparation of statutory and non-statutory plans.</p>

## It is the Policy of Dublin City Council:

S115

## Site-Specific Flood Risk Assessment

All development proposals shall carry out, to an appropriate level of detail, a Site-Specific Flood Risk Assessment (SSFRA) that shall demonstrate compliance with:

- The Planning System and Flood Risk Management, Guidelines for Planning Authorities, Department of the Environment, Community and Local Government (2009), as revised by Circular PL 2/2014 and any future amendments, and the Strategic Flood Risk Assessment (SFRA) as prepared by this development plan.
- The application of the sequential approach, with avoidance of highly and less vulnerable development in areas at risk of flooding as a priority and/or the provision of water compatible development only. Where the Justification Test for Plan Making and Development Management have been passed, the SSFRA will address all potential sources of flood risk and will consider residual risks including climate change and those associated with existing flood defences. The SSFRA will include site-specific mitigation measures, flood-resilient design and construction, and any necessary management measures (the SFRA and Appendix B of the above mentioned national guidelines refer). Attention shall be given in the site-specific flood risk assessment to building design and creating a successful interface with the public realm through good design that addresses flood concerns but also maintains appealing functional streetscapes. Allowances for climate change shall be included in the SSFRA.
- On lands where the Justification Test for Plan Making has been passed and where a small proportion of the land is at significant risk of flooding, the sequential approach to development will be applied, and development will be limited to Minor Development (Section 5.28 of the Planning System and Flood Risk Management Guidelines 2009) on the portion at significant risk of flooding. There will be a presumption against the granting of permission for highly or less vulnerable development which encroaches onto or results in the loss of the flood plain. Water compatible development only will be considered in such areas at risk of flooding which do not have existing development on them.



## It is the Policy of Dublin City Council:

S116	<p><b>Site-Specific Flood Risk Assessment</b></p> <p>Proposals which may be classed as ‘minor development’, for example small-scale infill, extensions to houses and small-scale extensions to existing commercial and industrial enterprises in Flood Zone A or B, should be assessed in accordance with the Guidelines for Planning Authorities on the Planning System and Flood Risk Management and Technical Appendices (2009), as revised by Circular PL 2/2014 and any future amendments, with specific reference to Section 5.28 and in relation to the specific requirements of the Strategic Flood Risk Assessment. This will include an assessment of the impact of climate change and appropriate mitigation. The policy shall be not to increase the risk of flooding to the development or to third party lands, and to ensure risk to the development is managed.</p>
S117	<p><b>Catchment-Based Flood Risk Management Plans</b></p> <p>To assist the OPW in implementing catchment-based Flood Risk Management Plans for rivers, coastlines and estuaries in the Dublin City area, including planned investment measures for managing and reducing flood risk, and have regard to their provisions/ recommendations.</p>
S118	<p><b>Protection of Flood Alleviation Infrastructure</b></p> <p>To put in place adequate measures to protect the integrity of flood alleviation infrastructure in Dublin City and to ensure new developments or temporary removal of any flood alleviation asset does not increase flood risk, while ensuring that new flood alleviation infrastructure has due regard to nature conservation, natural assets, open space and amenity values, as well as potential climate change impacts.</p>
S119	<p><b>Provision and Upgrading of Flood Alleviation Assets</b></p> <p>To facilitate the provision of new, or the upgrading of existing, flood alleviation assets where necessary and in particular, the implementation of proposed flood alleviation schemes, on the Santry, Camac, Dodder, Wad, Naniken, Mayne, Tolka and Poddle rivers as well as Clontarf Promenade, Sandymount/ Promenade (northwards towards Irishtown Nature Park subject to the outcome of a flood/ environmental study), Liffey estuary and any other significant flood risk areas being progressed through the planning process to completion during the lifetime of the 2022-2028 Dublin City Development Plan, with due regard to the protection of natural heritage, built heritage and visual amenities, as well as potential climate change impacts.</p>

**It is the Policy of Dublin City Council:**

<b>SI20</b>	<p><b>Basement Flood Risk Management</b></p> <p>That there is a general presumption against the development of basements for residential use below the estimated flood levels for Flood Zones A or B (see Section 15.18.4 and Appendix 9 for further guidance).</p>
<b>SI21</b>	<p><b>Managing Surface Water Flood Risk</b></p> <p>To minimise flood risk arising from pluvial (surface water) flooding in the City by promoting the use of natural or nature-based flood risk management measures as a priority, by requiring the use of sustainable drainage systems (SuDS) to minimise and limit the extent of hard surfacing and paving, and requiring the use of sustainable drainage techniques, where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risk and to deliver wider environmental and biodiversity benefits, and climate adaption.</p>

**It is an Objective of Dublin City Council:**

<b>SIO10</b>	<p><b>OPW Flood Relief Maintenance</b></p> <p>To support and facilitate the OPW in its duty to maintain flood relief schemes completed under the Arterial Drainage Acts, 1945-1995, including the schemes at River Dodder (Tidal), River Tolka, River Wad (Clanmoyle) South Campshires and Spencer Dock.</p>
<b>SIO11</b>	<p><b>Cross-Boundary Flood Management</b></p> <p>To work with neighbouring local authorities when developing cross-boundary flood management work programmes and when considering cross-boundary development.</p>
<b>SIO12</b>	<p><b>OPW Catchment-Based Flood Risk</b></p> <p>To work with the OPW in the development and implementation of catchment-based strategies for the management of flood risk – including those relating to storage and conveyance, and climate adaption.</p>

**9.5.4 Surface Water Management and Sustainable Drainage Systems (SuDS)**

The implementation of Sustainable Drainage Systems (SuDS) encourages nature-based solutions to managing surface water which utilise and mimic natural processes from the environment in order to reduce the volume of water run-off and improve water quality.

The increased use of SuDS helps control the rate of surface water run-off, thereby, reducing the volume of rainfall being discharged into our drainage systems and the potential for overflows and localised flooding. Facilitating run-off to percolate through natural features such as the natural ground, tree pits, green roofs and swales, will provide for staged water treatment helping to remove pollution and sediments and thereby, improving the water quality of our rivers in line with the requirements of the WFD.

Surface water drainage should be designed and implemented in ways that promote multiple benefits. Adopting sustainable drainage solutions and a softer engineered approach to managing water on site, as part of strategic green infrastructure or landscaping plans for example, can deliver many societal, environmental, biodiversity, amenity and climate action benefits and opportunities for healthy placemaking (for further guidance, see Section 15.6: Green Infrastructure and Landscaping).

The City Council will require the use of SuDS, incorporating predominantly nature-based solutions, within all developments in order to reduce the quantity of surface water run-off, improve water quality, and contribute to climate change adaptation. Management of surface water at or near source within the development site, via nature-based drainage systems will be the priority, with flow to main surface infrastructure controlled in accordance with the guidance set out in Appendices 11, 12 and 13. The Council's Surface Water Management Guidance (Appendix 13) should be consulted for further information and the proposed strategy agreed with the Council's Drainage Division. Any impact on biodiversity or landscape will be the subject of consultation with the Council's Parks, Biodiversity and Landscape Services Division.

#### It is the Policy of Dublin City Council:

##### S122 Sustainable Drainage Systems

To require the use of Sustainable Drainage Systems (SuDS) in all new developments, where appropriate, as set out in the Greater Dublin Strategic Drainage Study (Vol 2: New Development)/ Greater Dublin Regional Code of Practice for Drainage Works and having regard to the guidance set out in Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas, Water Sensitive Urban Design Best Practice Interim Guidance Document (DHLGH, 2021). Sustainable Drainage Systems (SuDS) should incorporate nature-based solutions and be designed in accordance with the Dublin City Council Sustainable Drainage Design & Evaluation Guide (2021) which is summarised in Appendix 12. SuDS should protect and enhance water quality through treatment at source while enhancing biodiversity and amenity.

**It is the Policy of Dublin City Council:**

<b>SI23</b>	<p><b>Green Blue Roofs</b></p> <p>To require all new developments with roof areas in excess of 100 sq. metres to provide for a green blue roof designed in accordance with the requirements of Dublin City Council's Green &amp; Blue Roof Guide (2021) which is summarised in Appendix 11.</p>
<b>SI24</b>	<p><b>Control of Paving of Private Driveways / Vehicular Entrances / Grassed Areas</b></p> <p>To require that all surface water run-off from new/ extended domestic driveways, repaired/ replacement driveways, and vehicular entrances (where such development is not exempted from the requirement to obtain planning permission), is managed through the use of SuDS, ensuring no increase in surface water discharges to the public drainage network (for further guidance, please refer to Appendices 5 and 12).</p>
<b>SI25</b>	<p><b>Surface Water Management</b></p> <p>To require the preparation of a Surface Water Management Plan as part of all new developments in accordance with the requirements of Appendix 13 – the Council's Surface Water Management Guidance.</p>
<b>SI26</b>	<p><b>Taking in Charge of Private Drainage Infrastructure</b></p> <p>To require that all new surface water infrastructure within public or private developments be constructed in accordance with the standards set out within the Greater Dublin Regional Code of Practice for Drainage Works, irrespective of the management and maintenance regime proposed for the development or whether or not the development is intended to be taken in charge, in full or in part (i.e. infrastructure shall be to designed to taking in charge standards).</p>

**It is an Objective of Dublin City Council:**

<b>SIO13</b>	<p><b>New Surface Water Infrastructure</b></p> <p>To provide for new and improved surface water public networks, including projects undertaken in conjunction with Irish Water where applicable/ where required, in order to reduce pollution and negative impacts on receiving waters to allow for more sustainable development.</p>
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**9.5.5 Waste Management and Circular Economy Practice**

The appropriate management of waste is essential to sustainable development, protecting public health, and maintaining a high-quality environment.

The focus of waste policy has changed in recent years with the 'take-make-discard' economy model being replaced by a 'circular' economy model which seeks greater resource efficiency, with the value of all materials maximised in accordance with the EU Waste Hierarchy of prevention, preparing for re-use, recycling, energy recovery and sustainable disposal. The government's Waste Action Plan for a Circular Economy 2020-2025 provides Ireland with a roadmap for waste planning and management and is supported by the Whole of Government Circular Economy Strategy 2022-2023 which provides a policy framework for Ireland's transition to a circular economy through new policies and practices. The Circular Economy Act was published in 2022. The plan encourages the transition from waste disposal towards using waste as a resource - facilitating the use of materials at their highest value for as long as possible, before reusing or recycling them at the end of their service life to generate minimal waste, thereby helping to reduce carbon emissions. The Dublin Waste-to-Energy Facility is an example of the circular economy in operation in the City.

The current Eastern Midlands Regional Waste Management Plan 2015–2021 (EMRWMP) provides a strategic vision and framework for the prevention, reduction and management of waste in a safe and sustainable manner and the development plan is required to take account of the requirements of this plan. Waste streams are viewed as a valuable material resource and landfilling discouraged in favour of higher value waste recovery options, such as the generation of energy from municipal waste. The plan sets strong targets on waste prevention, re-use, recycling and segregation, all to be achieved through active enforcement of waste policy/ legislation and the promotion of reuse, repair and resource efficiency activities. A National Waste Management Plan for a Circular Economy is due to be published in late 2022 and will replace the existing Regional Waste Management Plans.

The Council has developed and implemented a range of policies and actions in line with the EMRWMP, including public education and awareness initiatives to promote circular economy waste management principles. The launch of the Council's MODOS circular economy training programme in 2019 has encouraged small and medium-sized (SME) businesses to build sustainable waste management practices into their supply chains while the inclusion of waste management actions in the Dublin City Climate Change Action Plan 2019-2024 (CCAP) has increased the focus on sustainable and climate resilient management of city waste resources.

The Council is actively seeking to promote more sustainable and localised approaches to litter and waste management in line with the principles of a 15-minute city whilst coordinating the distribution of such facilities to avoid overconcentration where practicable. The City Council passed a motion in July 2019 committing to taking the domestic waste service back into Council ownership. The Council continues to manage a network of bring centres together with civic amenity sites and bottle banks for the reuse and recycling of a range of household streams outside of current private kerbside collection systems. Options for the provision of additional waste management infrastructure at industry and community

level, such as neighbourhood community food waste composters, are also being explored by the Council.

The Council's Litter Management Plan for the City for the period 2020-2022 aims to encourage the recycling of additional waste streams and to improve community access to waste management services by increasing the supply of local facilities (including textile recycling centres). The plan also seeks to introduce compartmentalised waste and recycling bins on-street/ in public spaces and to encourage the provision of recycling facilities in all new residential and commercial developments.

#### It is the Policy of Dublin City Council:

S127	<p><b>Sustainable Waste Management</b></p> <p>To support the principles of the circular economy, good waste management and the implementation of best practice in relation to waste management in order for Dublin City and the Region to become self-sufficient in terms of resource and waste management and to provide a waste management infrastructure that supports this objective. To support opportunities in the circular resource efficient economy in accordance with the National Policy Statement on Bioeconomy (2018).</p>
S128	<p><b>Sustainable Waste Management</b></p> <p>To prevent and minimise waste generation and disposal, and to prioritise prevention, recycling, preparation for reuse and recovery in order to develop Dublin as a circular city and safeguard against environmental pollution.</p>
S129	<p><b>Segregated Storage and Collection of Waste Streams</b></p> <p>To require new commercial and residential developments, to include adequate and easily accessible storage space that supports the separate collection of as many waste and recycling streams as possible, but at a minimum general domestic waste, dry recyclables and food waste as appropriate (for further guidance, see Appendix 7).</p>
S130	<p><b>Waste Management in Apartment Schemes</b></p> <p>To require that the storage and collection of mixed dry recyclables, organic and residual waste materials within proposed apartment schemes have regard to the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities 2020 (or and any future updated versions of these guidelines produced during the lifetime of this plan).</p>

## It is the Policy of Dublin City Council:

SI31	<p><b>Provision of Public Recycling Facilities in Large Retail Developments</b></p> <p>To require new retail developments in excess of 1,000sq.m (net) in size to provide for a local bring centre/ public reuse and recycling facilities on-site, where feasible, in line with the principles of the 15-minute city. The facilities should be adequately-sized and located to be easily accessible to the general public and should specifically provide for textile and glass bottle recycling (for further guidance, see Section 15.18.3).</p>
SI32	<p><b>Litter Management Plan</b></p> <p>To support the implementation of the Dublin City Council Litter Management Plan 2020-2022 and subsequent plans through enforcement of the litter by-laws, street cleaning and education and awareness campaigns.</p>

## It is an Objective of Dublin City Council:

SIO14	<p><b>Local Recycling/Reuse Infrastructure</b></p> <p>To provide for a citywide network of municipal civic amenity facilities/ multi-material public recycling and reuse facilities in accessible locations throughout the City in line with the objectives of the circular economy and 15-minute city.</p>
SIO15	<p><b>Waste Management Education</b></p> <p>To continue to support innovative circular economy waste management and education programmes such as the Council's MODOS initiative, which supports businesses to reduce their commercial waste generation.</p>
SIO16	<p><b>Eastern-Midlands Region Waste Management Plan</b></p> <p>To support the implementation of the Eastern Midlands Regional Waste Management Plan 2015–2021 and any subsequent plans in order to facilitate the transition from a waste management economy towards a circular economy.</p>
SIO17	<p><b>Innovative Waste Management Solutions</b></p> <p>To consider the feasibility of expanding the provision of public shared domestic waste bins and of developing trial public underground waste storage solutions in line with the review of the Dublin City Council Litter Management Plan 2020-2022 and preparation of the subsequent Litter Management Plan.</p>

**It is an Objective of Dublin City Council:**

<b>SIO18</b>	<p><b>Community Food Waste Composting</b></p> <p>To promote the piloting of community food waste composters as a tool for more sustainable and localised community approach to waste recovery and recycling.</p>
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**9.5.6 Contamination and Soil Remediation**

Some brownfield lands within Dublin City have been created through reclamation over a period of time and have a history of heavy industrial uses, with contamination arising as a result of spillages, leaks and improper handling of material and waste products. Contamination risks can also arise as a result of seepages from existing infrastructure, such as oil leaks from electricity cables. The City Council will liaise with the Regional Waste Management Office when considering proposals for the development of brownfield sites that require the offsite disposal of contaminated waste in order to provide for adequate site remediation. Proposals for the redevelopment of strategic brownfield lands will be required to be informed by a contaminated land risk assessment, and where contamination is evident, applicants will be required to remediate sites to EPA and internationally accepted standards (for further guidance, see Section 15.18.12).

**It is the Policy of Dublin City Council:**

<b>S133</b>	<p><b>Remediation of Contaminated Sites</b></p> <p>That all potentially contaminated sites shall be remediated to internationally accepted standards prior to redevelopment. Any unearthed contaminants will require some form of remediation measures which may require a licence from the Environmental Protection Agency (EPA).</p>
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**It is an Objective of Dublin City Council:**

<b>SIO19</b>	<p><b>Consultation with Regional Waste Management Office</b></p> <p>To liaise with the Regional Waste Management Office when considering proposals for the development of brownfield sites that require the offsite disposal of contaminated waste.</p>
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**It is an Objective of Dublin City Council:**

<b>SIO20</b>	<p><b>Managing Contamination Risk from Existing Infrastructure</b></p> <p>To proactively manage the contamination risks arising from existing infrastructure by encouraging the upgrading/ replacement of such infrastructure and the remediation of the affected sites, where appropriate.</p>
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**9.5.7 Air Quality**

Air quality is central to creating a clean environment and a healthy society. The primary sources of air pollution are emissions from exhaust pipes (nitrogen dioxide) and residential heating systems (particulate matter).

Air quality standards in Ireland are set by the EU Air Quality Directive which has resulted in national regulations outlining acceptable air pollution levels and an obligation on the City Council to monitor the City's air quality through a network of local air pollution sensors.

Dublin's air quality status is currently classed as generally 'good', however levels of nitrogen dioxide are a concern. Local authorities in the Dublin Region have prepared an Air Quality Management Plan for improvement in levels of nitrogen dioxide in ambient air quality for submission to the Environmental Protection Agency (EPA).

In February 2020, the Council signed-up to the UN/ World Health Organisation (WHO) Breathe Life commitments on air quality and to achieving WHO air quality guidelines (daily limit value) by 2030. The WHO guideline values are generally stricter than the comparable agreed EU standards.

The Department of Environment, Climate and Communications is in the process of developing a National Clear Air Strategy and the Council is committed to supporting its implementation at a city level once adopted. This will require local authorities to play a role in local data collection to support the EPA's air monitoring network and facilitate air quality alerts and pollen counts. The protection of air quality requires cross-sectoral policy responses including the reduction in the use of fossil fuel-based energy and also an increase in urban greening. Sustainable design and construction practices also have a role to play in helping to reduce emissions from the demolition and construction of new buildings (for further guidance, see Section 15.18.2).

**It is the Policy of Dublin City Council:**

<b>SI34</b>	<p><b>Management of Air Quality</b></p> <p>To monitor, pro-actively manage and improve air quality in the City through integrated land use and spatial planning measures to avoid, mitigate and minimise unacceptable levels of air pollution in accordance with national and EU policy Directives on air quality and, where appropriate, drive compliance with established targets.</p>
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**It is an Objective of Dublin City Council:**

<b>SIO21</b>	<p><b>Air Quality Data Collection</b></p> <p>To reduce harmful emissions and to achieve and maintain good air quality in the City by working with the Dublin local authorities and relevant agencies in the collection of local data through the Dublin City ambient air quality monitoring network.</p>
<b>SIO22</b>	<p><b>City Ambient Air Quality Monitoring Network</b></p> <p>To maintain and manage a Dublin City ambient air quality monitoring network in conjunction with the EPA and to commit to make available to the public the resulting air quality measurements through the <a href="https://dublincityairandnoise.ie/">https://dublincityairandnoise.ie/</a> website in real time, where feasible.</p>

**9.5.8 Noise Pollution**

Dublin City Council is actively engaged in the strategic management of noise in compliance with requirements under the EU Environmental Noise Directive and the Environmental Noise Regulations.

The City Council prepared strategic noise maps for the City in 2017 in conjunction with the other Dublin local authorities to inform the Dublin Agglomeration Environmental Noise Action Plan 2018 – 2023. The Noise Action Plan includes initiatives to avoid, prevent and reduce, on a prioritised basis, the harmful effects of long term exposure to daytime and night-time environmental noise from road traffic, rail and industrial sources. The Action Plan and noise maps are required to be reviewed every 5 years.

There are eight designated Quiet Areas in Dublin City and these relate to city parks and greenspaces with low environmental sound levels. The Noise Action Plan seeks to protect these areas from future increases in environmental noise, so that they remain ‘tranquil’ and quiet.

The Council, through the planning system, can minimise the adverse impacts of noise pollution by controlling developments which are noise intensive and keeping them away from more sensitive residential areas. Furthermore, where it is considered that a proposed development is likely to create disturbance due to noise, the planning authority can impose a planning condition limiting the hours of operation and level of noise generation (for further guidance, see Section 15.18.9).

Some areas of the City have greater potential to be affected by noise than others given their proximity to critical infrastructure such as Ports and Airports. The Noise Action Plan for Dublin Airport 2019-2023 and Dublin Airport Local Area Plan (2020) identify the potential for parts of northern Dublin to be exposed to noise from airport operations and set out a number of noise zones with restrictions on the level of development within each zone. Areas on the north-eastern periphery of the City fall within Dublin Airport Aircraft Noise Zone C, within which the effects of aircraft noise on sensitive developments must be adequately considered by the planning authority as part of the development management process. In line with the land-use planning policy of the Dublin Airport Local Area Plan and Fingal County Development Plan 2017-2023, it is a requirement that certain proposals for noise sensitive development in Zone C be accompanied by a noise assessment which should consider issues of noise annoyance and sleep disturbance at the design stage and to ensure, where appropriate, that noise insulation is incorporated within a proposed development (see Section 15.18.9 for further guidance).

#### It is the Policy of Dublin City Council:

S135	<p><b>Ambient Noise Quality</b></p> <p>To seek to preserve and maintain noise quality in the City in accordance with good practice and relevant legislation.</p>
S136	<p><b>Noise Management</b></p> <p>To support pro-active management of noise in the City through measures such as appropriate road surfaces to avoid, mitigate, minimise noise in accordance with good practice, relevant legislation and in line with the Dublin Agglomeration Environmental Noise Action Plan 2018-2023 (and subsequent plans).</p>
S137	<p><b>Noise Sensitive Development</b></p> <p>To give careful consideration to the location, design and construction of noise-sensitive developments, including the horizontal and vertical layout of apartment schemes, so as to ensure they are protected from major noise sources, where practical, and to minimise the potential for noise disturbance.</p>

**It is the Policy of Dublin City Council:**

<b>SI38</b>	<p><b>Noise Sensitive Development</b></p> <p>To ensure that new residential development close to approved commercial uses is suitably sound insulated (for further guidance, see Sections 15.14 and 15.18.9).</p>
<b>SI39</b>	<p><b>Protection of Designated Quiet Areas</b></p> <p>To protect the designated Quiet Areas within the City from increased exposure to noise.</p>
<b>SI40</b>	<p><b>Dublin Airport Noise Zones and other Noise Plans</b></p> <p>To take account of the Dublin Airport Local Area Plan (2020) and Noise Action Plan for Dublin Airport 2019-2023 as part of the development management process in order to ensure the protection/ prevention of noise sensitive uses within this zone whilst facilitating the continued operation of Dublin Airport; and to develop similar appropriate plans for areas adjacent to Dublin Port.</p>

**It is an Objective of Dublin City Council:**

<b>SIO23</b>	<p><b>Dublin Agglomeration Environmental Noise Action Plan</b></p> <p>To support the implementation of the Dublin Agglomeration Environmental Noise Action Plan 2018–2023 and subsequent plans in co-operation with the other Dublin local authorities.</p>
<b>SIO24</b>	<p><b>Noise Monitoring and Enforcement</b></p> <p>To support and facilitate the monitoring and enforcement by the environmental health department of noise reduction measures in areas experiencing excess noise.</p>

**9.5.9 Public and External Lighting**

The provision of high quality, smart and energy efficient public lighting enhances peoples' experience of the City and their sense of place, safety and security. Artificial light provides valuable benefits to society, including through extending opportunities for sport and recreation, and can be essential to a new development.

Light pollution can arise when external lighting is poorly designed and/ or managed, leading to inappropriate or unwanted light spillage, sky glow and glare. This can have negative impacts on general amenities and wildlife. Lighting of external areas and of buildings should

be designed to minimise the impact on protected species, such as light sensitive bat species in accordance with best practice and industry standards<sup>2</sup>, the Technical Guidance Note on Biodiversity for Development Management in Dublin City (DCC 2021) and the National Parks and Wildlife Service (NPWS) Bat Mitigation Guidelines for Ireland (2006). Lighting fixtures should provide only the amount of light necessary and should shield the light given out so as to avoid creating glare or emitting light above a horizontal plane.

The Council will ensure that public lighting is appropriately and sensitively designed in order to balance the requirement for adequate lighting with safety, amenity and environmental considerations.

#### It is the Policy of Dublin City Council:

SI41	<p><b>Lighting Standards</b></p> <p>To provide and maintain high quality and appropriate street/ outdoor lighting on public roads, footways, cycleways, public realm throughout the City in accordance with the Council's Vision Statement for Public Lighting in Dublin City and related public lighting projects. In general, the lighting of roads and public amenity areas shall be provided in accordance with the requirements of the latest Public Lighting Standards IS EN13201 and further updates.</p>
SI42	<p><b>Light Pollution</b></p> <p>To not allow unnecessary, inappropriate or excessive artificial lighting and to ensure that the design of public and external lighting proposals minimises light spillage or pollution and has due regard to the character, environmental sensitivity and residential amenity of the surrounding area.</p>
SI43	<p><b>Energy Efficient Lighting</b></p> <p>To require that new developments are appropriately lit and that all public and external lighting in new residential and commercial developments use highly energy efficient luminaires, with the use of energy saving strategies (such as dimming in line with nationally agreed tariffs) encouraged.</p>

#### 9.5.10 Control of Major Accident Hazards Directive (Seveso Directive)

The SEVESO III Directive (2012/18/EU) requires that the objectives of preventing major accidents and limiting their consequences should be taken into account in land-use policy.

<sup>2</sup> Institution of Lighting Professionals (UK) and Bat Conservation Trust (UK) (2018) Bats and artificial lighting in the UK - Bats and the Built Environment series. Guidance Note 08/18. Rugby, Warwickshire: ILP.

The Directive was transposed into Irish legislation through S.I. No. 209 of 2015 Chemicals Act Control of Major Accident Hazards (COMAH) Regulations 2015.

COMAH establishments, are defined as locations (typically industrial) where significant quantities of dangerous substances are stored and are categorised as Upper Tier or Lower Tier by the type and quantity of hazardous substances that they store.

The Health and Safety Authority (HSA) advises planning authorities on the consultation distance which applies to an establishment following the receipt of a notification from the operator. It also provides technical advice to planning authorities in respect of certain development proposals within that consultation distance/ on the site (see also Appendix 8).

#### It is the Policy of Dublin City Council:

<b>SI44</b>	<p><b>COMAH Establishments/SEVESO</b></p> <p>To have regard to the provisions of the SEVESO III Directive (2012/18/EU) relating to the control of major accident hazards involving dangerous substances and its objectives to prevent major accidents and limit the consequences of such accidents. Dublin City Council will have regard to the provisions of the Directive and recommendations of the HSA in the assessment of all planning applications located on, or impacted by, COMAH establishments in accordance with Guidance on Technical Land-use Planning Advice: for planning authorities and operators of COMAH establishments (2021).</p>
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#### 9.5.11 Digital Connectivity Infrastructure

The rapidly evolving digital connectivity sector is a key enabler of numerous economic, social and educational activities. The sector covers access to broadband, digital fibre services and wireless connectivity such as Wi-Fi, satellites and wired technologies.

High quality digital connectivity infrastructure, both fixed and wireless, is essential to supporting Dublin's technology and digital service sectors and plays a central role in supporting the delivery of city services and the Internet of Things.

The demand for super connectivity and the importance of secure and reliable communications networks will increase over the coming years as we enter a new era of 5G connectivity. The transition to 5G use will require local authorities to play a greater role in supporting the rollout of digital connectivity infrastructure and telecoms networks and it will be essential to ensure the future-proofing of public realm and capital investment projects across the City to cater for digital connectivity infrastructure.

The City Council will also be required to take a more proactive role in facilitating the deployment of telecoms infrastructure and equipment (including small cells) in compliance with the European Electronic Communication Code<sup>3</sup> (EECC) and Broadband Cost Reduction Directive<sup>4</sup>. This will involve opening up its assets such as ducting, buildings, street furniture and columns.

#### Ducting and Access to City Assets

The City Council's assets and ducting networks have an important role to play in ensuring that the City is digitally connected through the provision of high quality digital connectivity infrastructure.

The EECC requires that local authorities facilitate requests for access to its assets in a timely manner to support the development of telecoms infrastructure and to future-proof the City. The Council has sought to comply with EU legislation by streamlining internal processes, charges and technical requirements for operators and providers, to provide for easier access to these city assets.

The Council are cognisant of the need to balance the objective to provide effective telecoms infrastructure with objectives to protect streetscape heritage and reduce on street clutter and are committed to working proactively with telecommunication industry during the development and deployment phase of telecommunications infrastructure to achieve this.

The Council will develop a 'Dig Once' code of practice to ensure that digital connectivity infrastructure is delivered in a strategic way, enabling better co-ordination between operators and providers in order to avoid inefficient, unduly disruptive and ad-hoc infrastructure provision. It is anticipated that such an initiative will optimise underground asset space planning and deployment, while all new capital and public realm investments will support future telecom needs.

#### It is the Policy of Dublin City Council:

##### Support for Digital Connectivity

**SI45**

To support and facilitate the sustainable development of high-quality digital connectivity infrastructure throughout the City in order to provide for enhanced and balanced digital connectivity that future-proofs Dublin City and protects its economic competitiveness (for further guidance see Section 15.18.5).

<sup>3</sup> Regulation (EU) 2020/911 of 30 June 2020 pursuant to Article 57(2) Directive (EU) 2018/1972, which established the European Electronic Communication Code.

<sup>4</sup> Regulation 2016 - SI No 391 of 2016 - Broadband Cost Reduction Directive pursuant to Directive (EU) 2014/61/EU.

**It is the Policy of Dublin City Council:**

<b>SI46</b>	<p><b>Open Access / Operator Neutral Host Connectivity</b></p> <p>To require all new developments to provide open access connectivity arrangements directly to the individual premises to enable service provider competition and consumer choice.</p>
<b>SI47</b>	<p><b>Future-Proofing for Digital Connectivity Requirements</b></p> <p>To require the consideration and provision of telecoms / digital connectivity infrastructure as part of the design of all Council capital projects and public projects, including public realm improvements (where appropriate), to ensure the future-proofing of capital investment in digital connectivity infrastructure in line with the EU Broadband Cost Reduction Directive Regulations (2020).</p>
<b>SI48</b>	<p><b>Sharing and Co-Location of Digital Connectivity Infrastructure</b></p> <p>To support the appropriate use of existing assets such as lighting, traffic poles and street furniture for the deployment of telecoms equipment and to encourage the sharing and co-location of digital connectivity infrastructure (including small cells, access points, communications masts and antennae) in order to avoid spatially uncoordinated and duplicitous provision that makes inefficient use of city space and negatively impacts on visual amenity and built heritage.</p>

**It is an Objective of Dublin City Council:**

<b>SIO25</b>	<p><b>Ducting / Dig Once</b></p> <p>To support the Council's Telecom's Unit in the development and implementation of a Dig Once Code of Practice, in order to provide for greater coordination in the delivery of telecoms/ digital connectivity infrastructure and use of underground ducting asset space.</p>
<b>SIO26</b>	<p><b>Digital Connectivity Infrastructure Provision on Council Capital Projects/ Public Projects</b></p> <p>To incorporate telecommunications and wireless requirements into all Council capital projects in order to future-proof provision of digital connectivity infrastructure.</p>



**It is an Objective of Dublin City Council:**

<b>SIO27</b>	<p><b>National Broadband Plan</b></p> <p>To support and facilitate the delivery of the National Broadband Plan and international fibre communications links, including full interconnection between the fibre networks in Northern Ireland and the Republic of Ireland.</p>
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**9.5.12 Energy Utilities**

The energy utilities sector will need to decarbonise to align with National and European policy requirements for a reduction of 51% in greenhouse gas emissions by 2030 (relative to a baseline of 2018) and net zero emissions by 2050. The sector is responding to the decarbonisation agenda by adapting their energy production systems and network operations to enhance the overall share of variable renewable energy technologies, while continuing to ensure there is sufficient energy supply to meet demand arising from the growth of the City's population and economy.

Gas and electricity are the energy utilities which have traditionally heated and powered Dublin City, which is identified as a major energy demand centre. The development of low carbon, resilient, reliable and indigenous energy sources and networks is recognised as very important to supporting the social and economic development of Dublin, especially if the City is to fulfil its role as a digital connectivity hub which attracts high technology industries. Support for decentralised and indigenous energy sources, such as the Dublin district heating project, will have an important role to play in achieving this objective alongside small scale/ community investment in solar and other domestic scale renewables. In the short to medium term, it is prudent that existing electricity generation capacity is retained in order to ensure security of electricity supply. Any potential impact of large energy users will be assessed against this need.

The Council will support energy utility providers in their efforts to deliver, reinforce and strengthen existing electricity and natural gas transmission/ distribution grid infrastructure, electricity interconnection and electricity storage in order to ensure security of electricity supply and support the growth of renewable electricity generation. The Council will also support new infrastructure projects and technologies with particular emphasis on renewable, alternative and decentralised energy sources, and those which are less carbon intensive in line with the Electricity and Gas Networks Sector Climate Change Adaptation Plan (2019), Shaping our Electricity Future - A Roadmap to achieve our Renewable Ambition (2021), the National Energy Security Framework and any emerging national policies relating to energy and electricity supply or security.

The linkage of renewable energy proposals to the electricity and gas transmission grid will be actively supported by the Council and the development of onshore or coastal enabling

infrastructure for offshore renewable energy installations will also be supported in appropriate locations in accordance with the National Marine Planning Framework (2021).

The importance of Poolbeg Peninsula in providing infrastructure and assets to support the circular economy, waste treatment, environmental protection, the operation of the national grid system, decarbonisation of the energy utilities sector and the deployment of renewables, is recognised and the Council will support the development of the peninsula as a Strategic Sustainable Infrastructure Hub for the City.

The Council will continue to safeguard national grid infrastructure from encroachment by other developments that could compromise the operation of the energy utility networks.

#### It is the Policy of Dublin City Council:

SI49	<p><b>Support for Energy Utilities</b></p> <p>To support the development of enhanced electricity gas supplies, and associated transmission and distribution networks, to serve the existing and future needs of the City, and to facilitate new transmission infrastructure projects and technologies including those to facilitate linkages of renewable energy proposals to the electricity and gas transmission grid that might be brought forward in the lifetime of this Plan. In this respect, the City Council will have regard to the 'Guiding Principles' for facilitating the provision of energy networks set out by the Eastern and Midland Regional Assembly Regional Spatial and Economic Strategy (2019-2031).</p>
SI50	<p><b>Undergrounding of Energy Utility Infrastructure</b></p> <p>To require that the location of local energy services such as electricity, telephone and television cables be underground wherever possible, and to promote the undergrounding of existing overhead cable and associated equipment, where appropriate, in the interests of visual amenity and facilitating compact urban development.</p>
SI51	<p><b>Renewable Energy Use and Generation</b></p> <p>To promote renewable energy generation, use and storage at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.</p>

## It is the Policy of Dublin City Council:

S152	<p><b>Poolbeg Peninsula Strategic Sustainable Infrastructure Hub</b></p> <p>To support the development of the Poolbeg Peninsula as a Sustainable Energy and Infrastructure Hub for Dublin with a strategic role in accommodating the City's critical hard infrastructure and to recognise the significant role that it plays in facilitating Dublin's transition to a low carbon and climate-resilient city.</p>
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## It is an Objective of Dublin City Council:

SIO28	<p><b>EirGrid Development Strategy</b></p> <p>To support EirGrid's Grid Development Strategy - Your Grid, Your Tomorrow (2017), Implementation Plan 2017 – 2022 and Transmission Development Plan (TDP) 2016 and any subsequent plans prepared during the lifetime of this Plan, in order to provide for the safe, secure and reliable supply of electricity.</p>
SIO29	<p><b>Smart Grid</b></p> <p>To support the roll-out of the Smart Grids and Smart Cities Action Plan (2013) in order to enable new connections, grid balancing, energy management and micro-grid development.</p>
SIO30	<p><b>Facilitating Offshore Renewable Energy</b></p> <p>To support the sustainable development of Ireland's offshore renewable energy resources in accordance with the National Marine Planning Framework (2021) and Offshore Renewable Energy Development Plan (2019) and its successor, including any associated domestic and international grid connection enhancements.</p>

Figure 9-2: Regional Infrastructure

