

Physical Infrastructure Strategy

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Vision Statement: To continue protecting both the environment and the citizens of Dún Laoghaire–Rathdown through the provision of high quality, resilient environmental infrastructure and by aspiring to a carbon–neutral County through the promotion of resource preservation and energy efficiency and through the application of considered climate change mitigation policies for the duration of this Development Plan and beyond. At a more strategic level, and where considered necessary and appropriate, the Council will promote and champion the development of evidence - based climate change adaptation systems targeted at moderating the negative effects of climate change.

5.1 Environmental Infrastructure and Management

5.1.1 Water Supply and Wastewater

(i) Introduction and Background

The natural and built environment of the County requires to be protected and enhanced through the provision of a range of high quality and efficient water supply and wastewater facilities. The delivery and maintenance of a high quality water services infrastructure is fundamental both to the quality of life and well being of the citizens of Dún Laoghaire-Rathdown. The delivery and maintenance of this infrastructure is also paramount to the continued sustainable development and economic growth of the County, in line with National and Regional designations and targets.

Since January 2014 Dún Laoghaire-Rathdown County Council no longer has any direct control in relation to the provision of Water or Wastewater Services. The delivery, integration and implementation of strategic water and wastewater projects and infrastructural improvements are now the responsibility of the newly established State body 'Irish Water'. The County Council will work closely with Irish Water to ensure that the County Development Plan and - in particular the Core Strategy - continue to align with both the National Spatial Strategy and the Regional

Planning Guidelines and that the provision of water/wastewater services will not be a limiting factor in terms of forecasted growth.

(ii) Statutory and Policy Context

Water supply and wastewater policy in Dún Laoghaire-Rathdown is influenced and informed by a number of EU, Department of the Environment, Community and Local Government (DoECLG), OPW and EPA policy documents, and by legislative reforms, which have been adopted/published in recent years and which will have a significant impact on the delivery of environmental and waste services within the County. The policies and objectives contained within this Chapter are reflective of the over-arching higher level documents outlined below:

- EU Water Framework Directive (2000).
- Greater Dublin Strategic Drainage Study (GSDS) (2005).
- European Communities Common Implementation Strategy Guidance Document No. 20
- European Communities (Water Policy) Regulations (2003 as amended).
- European Communities (Surface Water) Regulations (2009).
- European Communities (Groundwater) Regulations (2010).



Pump House, Stillorgan Reservoir

- European Communities (Drinking Water) Regulations (2014).
- Waste Water Discharge Licenses/ Authorisations (2007).
- Water Services Act (2007 as amended).
- Strategic Water Plans (Water Services Act 2007 as amended).
- Waste Management Act (1996 as amended).
- Government Policy Statement on 'Strategic Importance of Transmission and Other Energy Infrastructure' (2012).
- Government White paper 'Delivering a Sustainable Energy Future for Ireland, Energy Policy Framework 2007-2020' (2007).

In terms of Irish Water's statutory footing, Irish Water was established – under the Water Services Act 2013 as an independent subsidiary of the Bord Gáis Éireann Group. Irish Water will be allocated – after the initial phased approach throughout 2014-2017 - full responsibility for all aspects of water service planning, delivery and operation at national, regional and local levels. The function and role of Irish Water includes:

- abstracting and treating water.
- delivering water and wastewater services to homes and businesses.
- installing water meters and billing domestic and business customers.
- raising finance to fund improvements and repairs in the water system.
- maintaining and operating the water system.

In the short-term, Irish Water have published their proposed 2014-2016 Capital Investment Plan (CIP), which outlines the indicative short-term investment priorities in water services infrastructure. The CIP aims to deliver improvements in drinking water quality, leakage, wastewater compliance, business efficiencies and customer service.

In the medium-to-long-term Irish Water will produce and implement a series of 6 year Multi-Annual Capital Investment Plans which will synchronise with the 6 year River Basin Management Plan (RBMP) cycles. The 6 year Capital Investment Plans are to be guided by a 25-year Water Services Strategic Plan (WSSP) which is required to focus on how capacity deficits will be addressed and what the primary strategic objectives of Irish Water are to be. The Plan will set strategic objectives taking into account capacity deficits and demographic and economic trends. The parameters of the WSSP have not yet been fully finalised but is likely to require Ministerial endorsement. The WSSP is unlikely to be produced prior to 2016.

The Plan does include Irish Water 'Enabling Policies' to ensure that the important role of Irish Water within the Planning system is catered for within - and over the lifetime of - the County Development Plan.

Irish Water Enabling Policies

Timely Delivery of Water Services

It is the policy of the Council to support Irish Water in the facilitation of the timely delivery of the water services required to realise the development objectives of this Plan.

Water and Wastewater Network Design and Construction

It is the policy of the Council to support the provision of integrated and sustainable water services through effective consultation with Irish Water on the layout and design of water services in relation to the selection and planning of development areas and the preparation of Masterplans/LAPs/SDZ Planning Schemes.

Ensuring Availability of Water Services for Planned Development

It is the policy of the Council to advise applicants to consult with Irish Water regarding capacity issues prior to applying for planning permission – where practicable.

Protecting Water Services Infrastructure

It is the policy of the Council to advise applicants to consult with Irish Water and be aware of Irish Water's requirements regarding way leaves and buffer zones around public water utilities.

Promote Water Conservation

It is the policy of the Council to promote and support water conservation and demand management measures among all water users.

Separate Water Drainage Systems

It is the policy of the Council to require new development to provide a separate foul and surface water drainage system – where practicable.

Domestic Waste Water Treatment Systems

It is the policy of the Council to refuse planning permission for any residential development that requires the provision of domestic waste water treatment systems, other than for single house systems.

It is the policy of the Council to strongly discourage the provision of individual septic tanks and domestic waste water treatment systems and, where applicable, to connect the development to the public sewer mains network, in order to minimise the risk of groundwater pollution. Where such facilities are permitted, full compliance with the prevailing regulations and standards including the EPA Code of Practice Wastewater Treatment and Disposal Systems Serving Single Houses (P.E. 10) (EPA 2009), as may be amended, will be required."



Shanganagh Water Treatment Facility

(iii) Achievements to date

Since 2010, significant progress has been made in the delivery of water services infrastructure serving the County including:

- The opening of the Shanganagh Wastewater Treatment Works which is key to unlocking much of the, as yet unrealised, development potential of the southern part of the County (and north County Wicklow).
- The opening of the Sandyford High Level Water Supply Scheme.
- The completion of the Glencullen water supply and improvement scheme.

(iv) Challenges

The overall water supply and wastewater situation for the whole Greater Dublin Area (GDA) is critical and is almost certain to become more so in the short term. Water services in the GDA came under severe pressure from the population and economic growth experienced in the region and has been a serious issue of concern since the early 1990's. The speed of change and pace of development experienced previously, in both the wider Dublin Region and within Dún Laoghaire-Rathdown has placed stresses and pressures on the water supply and wastewater infrastructure of the County.

The Old Connaught-Woodbrook Water and Sewerage Schemes - which are absolutely critical to servicing the south of the County (and north Wicklow) - have not been progressed and there are as a consequence still major water and wastewater infrastructural shortcomings in the south of the County. The Council continues to work with Irish Water to address the water and wastewater infrastructural shortcomings in the south of the County to ensure the development potential of the major growth cores at Old Conna,

Woodbrook, Shanganagh, Rathmichael and Fassaroe (County Wicklow) are 'unlocked' and realised. The development of these growth centres are fully aligned with, and listed in the Regional Planning Guidelines (RPGs). However, neither the Settlement Strategy nor the Economic Strategy - as detailed for these areas within the RPGs - can be delivered without the required water and wastewater services infrastructure.¹

5.1.1.1 Policy EI1: Water Supply and Appropriate Assessment

It is Council policy to require that all developments relating to water supply and waste water treatment are subject to screening for Appropriate Assessment to ensure there are no likely significant effects on the integrity, defined by the structure and function, of any Natura 2000 sites and that the requirements of Article 6 of the EU Habitats Directive are met.

5.1.1.2 Policy EI2: Wastewater Treatment and Appropriate Assessment*

It is Council policy to provide adequate wastewater treatment facilities to serve the existing and future population of the County, subject to complying with the Water Framework Directive and the associated River Basin Management Plan or any updated version of this document, 'Water Quality in Ireland 2007-2009' (EPA 2011) or any updated version of the document, Pollution Reduction Programmes for Designated Shellfish Areas, the Urban Waste Water Treatment Directive and the Habitats Directive.

¹ Bray is identified within the RPGs as a Metropolitan Consolidation Town and Cherrywood as a Large Growth Town II. In addition, Bray /Cherrywood /Greystones are designated as a Core Economic Area within the RPGs. Bray is identified as the primary town within this Core Economic Area which includes Fassaroe and Old Conna within its environs.

5.1.1.3 Policy EI3: Surface Water Drainage and Appropriate Assessment*

It is Council policy to require that a Sustainable Drainage System (SuDS) is applied to any development and that site specific solutions to surface water drainage systems are developed, which meet the requirements of the Water Framework Directive and the associated River Basin Management Plans and 'Water Quality in Ireland 2007-2009' (EPA 2011) or any updated version of the document.

5.1.1.4 Policy EI4: Groundwater Protection and Appropriate Assessment

It is Council policy to ensure the protection of the groundwater resources in and around the County and associated habitats and species in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010. In this regard, the Council will support the implementation of Irish Water's Water Safety Plans to protect sources of public water supply and their contributing catchment.

5.1.1.5 Policy EI5: Water Supply and Wastewater*

It is Council policy - in conjunction with, and the support of, Irish Water - to provide adequate high quality drinking water, to promote water conservation and to continue the development and improvement of the water supply and wastewater systems throughout Dún Laoghaire-Rathdown in order to meet the anticipated water and wastewater requirements of the County - all in accordance with the recommendations set out in the 'Greater Dublin Water Supply Strategic Study' and 'The Greater Dublin Strategic Drainage Study'.

The Council - in conjunction with Irish Water - shall ensure conformity with the relevant recommendations set out in 'The Provision and Quality of Drinking Water in Ireland – A Report for the Year 2012' (EPA Office of Environment Enforcement, 2013). The Council will also work alongside Irish water in undertaking any improvement works required by the EPA's Remedial Action List. Existing and new populations proposed in the County Development Plan shall be served with clean drinking water. The Council will support Irish Water to ensure that compliance is achieved, as a minimum, with regard to the 48 parameters set out under the European Union (Drinking Water) Regulations 2014. The Council has systems in place – which will aid Irish Water - to obtain compliance with these standards. In addition, protocols are in place to manage any incident of non-compliance and ensure a return to compliance as soon as possible.

It is Council policy to assist Irish Water in complying with the Waste Water Discharge Licence for the Shanganagh agglomeration issued under Regulation 28 (1) of the Waste Water Discharge (Authorisation) Regulations 2007.

Development proposed in the County Development Plan shall be preceded by sufficient capacity in the public waste water treatment plants and appropriate extensions in the existing public waste water treatment catchments. The Council shall implement the relevant recommendations set out in 'Focus on Urban Waste Water Discharges in Ireland' (EPA, 2012).

Irish Water's ongoing and proposed programmes of water supply and wastewater infrastructure works, will be targeted to ensure the availability of appropriately serviced residential and commercial lands, to cater for an adequate supply of housing and facilitate continued employment growth and opportunities in the County. This will allow Dún Laoghaire-Rathdown to cater in a coherent way for its residents and business community and to fulfil its role at National and Regional level by fostering the continuing sustainable consolidation of development within the Metropolitan area.

Any programme to be advanced by Irish Water – in conjunction with the Council – will require to be multi-faceted and encompass such matters as water conservation and leakage control, upgrading of older sections of the various distribution networks, elimination of untreated municipal sewage to coastal waters and the decommissioning of septic tanks for dwellings in areas that are now served by mains drainage.

In addition, it is Council policy to promote the advancement of grey water re-use systems and rain water harvesting systems and other water conservation measures in the County, in accordance with best practice and subject to compliance with Ministerial Guidelines/Regulations.

5.1.1.6 Policy EI6: Integrated Water Management Plans*

It is Council policy - in conjunction with, and the support of Irish Water - to contribute to the promotion of the development of Integrated Water Management Plans for the Dublin Region and to participate in any pilot scheme for the establishment of such Plans.

The primary purpose of Integrated Water Management Plans is to examine issues of quantity and quality of river waters at Catchment and River Basin level so that the entire life cycle of the waters can be managed in a sustainable fashion.

The Council shall work to ensure that, when adopted, the relevant policies and objectives of the Eastern River Basin Management Plan shall be integrated into the Plan through amendment or otherwise. The Council will promote the implementation of



dlr Gully Cleansing

the specific objectives, at water body level, of any agreed Programme of Measures prepared as part of the River Basin Management Plan, as well as relevant recommendations contained within 'Water Quality in Ireland 2007-2009' (EPA, 2011) or any updated version of the document.

The Council will also have regard, where relevant, to the EU's 'Common Implementation Strategy Guidance Document No. 20', which provides guidance on exemptions to the environmental objectives of the Water Framework Directive.

5.1.1.7 Policy EI7: Water Quality Management Plans

It is Council policy to support Irish Water in its implementation of Water Quality Management Plans for ground, surface, coastal and estuarine waters as part of the implementation of the EU Water Framework Directive.

The Council shall work alongside the relevant stakeholders, including Irish Water, to ensure the implementation of Water Quality Management Plans as required by the EU Water Framework Directive, as well as relevant recommendations contained within 'Water Quality in Ireland 2007-2009' (EPA, 2011) or any updated version of the document.

5.1.1.8 Policy EI8: Sustainable Drainage Systems*

It is Council policy to ensure that all development proposals incorporate Sustainable Drainage Systems (SuDS).

Development will only be permitted where the Council is satisfied that suitable measures have been considered that balance the impact of drainage through the achievement of control of run-off quantity and quality, and enhance amenity and habitat (for further details refer to Sections 8.2.8.3, 8.2.9.7, 8.2.9.11 and 8.2.10.4 and Appendix 14 Green Infrastructure Strategy). In particular the requirements of the 'SuDS Manual' by the UK's Construction Industry Research and Information Association (CIRIA) shall be followed unless specifically exempted by the Council and/or Irish Water.

5.1.1.9 Policy EI9: Stormwater Impact Assessments*

It is Council policy to ensure that all new significant developments prepare a Stormwater Impact Assessment which incorporate Stormwater Audits in accordance with the Council's Stormwater Management Plan Guidance Document and the Council's Development Management Thresholds Information Document.

The Council aims to minimise the volume and speed of run-off over the impervious surfaces created by developments. Therefore all new significant development requires stormwater management systems of some type.

5.1.1.10 Policy EI10: Storm Overflows of Sewage to Watercourses*

It is Council policy to work alongside Irish Water to minimize the number and frequency of storm overflows of sewage to watercourses and to establish, in co-operation with the adjoining local authorities and Irish Water, a consistent approach to the design, improvement and management of these intermittent discharges to ensure that the needs of the Region's receiving waters are met in a cost effective manner.

Stormwater overflows can have significant negative impacts on receiving waters in terms of both water quality and flooding. The Council, in conjunction with Irish Water, will endeavour to ensure Best Management Practices are utilised to protect receiving waters.

5.1.1.11 Policy EH11: Water Services Investment Programme*

It is Council policy to support and co-operate with Irish Water to deliver on key water services projects as detailed within Irish Waters proposed 2014-2016 CIP and any subsequent water service plans².

The projects detailed in Irish Water's proposed 2014-2016 CIP are classified as, 'Continue in Construction', 'Review Scope and Commence Construction' and 'Continue Planning and Business Case Review'. Key projects within Dún Laoghaire-Rathdown are detailed within Table 5.1.1. below.

Table 5.1.1: Water Service Investment Projects

Project title	Classification
Dún Laoghaire Sewerage Scheme Phase 1 – Contract 4 – Service Water Separation.	Continue in construction.
Dún Laoghaire Sewerage Scheme Phase 1 – Contract 2a – Attenuation Tank.	Continue in construction.
Dún Laoghaire Sewerage Scheme Phase 1 – Contract 2c – Burton Hall Avenue Foul Sewer Upgrade.	Continue in construction.
Old Connaught-Woodbrook Water Supply and Sewerage Schemes.	Continue Planning and Business Case Review.
Dún Laoghaire Sewerage Scheme Phase 1 – Contract 2e – Moreen Environs Foul Sewer Upgrade, Phase 4.	Continue Planning and Business Case Review.
Dún Laoghaire Sewerage Scheme Phase 1 – Contract 2 – Network Upgrade Sandyford/Stillorgan Improvement-Tunnel.	Continue Planning and Business Case Review.
Dún Laoghaire Sewerage Scheme Phase 1 – 2d Foul Sewer Upgrade as part of Leopardstown Roundabout Upgrade	Continue Planning and Business Case Review.

Note: Further detail on additional projects which are not contained within Irish Waters proposed 2014-2016 CIP but remain as objectives of the County Council are detailed in Section 5.1.4.

² The establishment of additional projects may be forthcoming within the 25-year Water Services Strategic Plan and the 6-year Multi-Annual Capital Investment Plans.

5.1.2 Waste Management

(i) Introduction and Background

Waste Management is an integral requirement essential in the promotion of sustainable development, enhancing good public health and the protection of environment. Continuing economic progress in Dún Laoghaire-Rathdown relies on a high quality environment which, in turn, is dependent on the availability of necessary waste management facilities. Dún Laoghaire-Rathdown County Council is strongly committed to the promotion of the Waste Hierarchy as defined by EU legislation.

In this regard, the Council manages an extensive network of "Bring Bank" facilities across the County area for recycling glass, cans and textiles. These include sites at shopping centres and public car parks, that are all provided free of charge to the public.

Ballyogan Recycling Park is the Council's main recycling and disposal facility, which accepts a wide range of household waste types. The facility is open to the public 7 days a week, with several waste streams accepted free of charge. Eden Park and Shanganagh Recycling Centres are open Monday to Saturday and also offer recycling facilities for a range of materials free of charge.

In terms of waste collection, Dún Laoghaire-Rathdown County Council no longer collects household and trade wastes. This is now undertaken by private, commercial waste operators.

(ii) Statutory and Policy Context

The Waste Management policies contained within this Chapter are predicated on the EU Waste Hierarchy of prevention, preparing for re-use, recycling, energy recovery and sustainable disposal. The policies and objectives are reflective of the over-arching higher level documents and legislation outlined below:

- EU Waste Framework Directive 2008/98/EC.
- EU Ambient Air Quality and Cleaner Air for Europe Directive (2008/50/EC).
- Air Quality Standards Regulations 2011.
- EU Control of Major Accidents Directive, European Council Directive 2012/18/EU.
- Waste Management Acts 1996 (as amended).
- Air Pollution Act 1987.
- Litter Pollution Act 1997.
- Protection of Environment Act 2003 (as amended).
- Waste Management Plan for the Dublin Region, 2005-2010.
- Towards a Resource Efficient Ireland, A National Strategy to 2020, Incorporating Ireland's National Waste Prevention Programme (2014).



Cabinteely Tidy Towns Team

- National Hazardous Waste Management Plan, 2014-2020.
- Dublin Agglomeration Environmental Noise Action Plan December 2013 – November 2018.
- Dublin Regional Air Quality Management Plan 2009-2012.
- Dún Laoghaire-Rathdown Litter Management Plan, 2014-2017.

Appendix 1 contains detailed information on the documents listed above. At the heart of these statutory documents is the overarching requirement to be fully consistent with the EU Waste Hierarchy.

(iii) Achievements

Since 2010, significant progress has been made in the delivery of waste management infrastructure, including:

- The continued restoration and remediation of the former landfill site at Ballyogan, for eventual redevelopment and re-use as Jamestown Regional Park.
- The continuing maintenance, management and expansion of the extensive network of 'Bring Bank' and recycling facilities across the County.
- The continuation of waste electrical and electronic equipment (WEEE) collection days.
- The development of a partnership with Rothar for recycling bicycles.
- Implementation of the regulation of waste segregation at source.
- Provision of the Freetradeireland.ie service for reuse/recycling of unwanted items (Since launch

of the Freetradeireland.ie website in 2010 residents of Dún Laoghaire-Rathdown have achieved an estimated €1.1million saving from reusing 10,600 items equating to approx. 162 tonnes of material being diverted from landfill).

These achievements, coupled with various 'soft' measures such as the Green Flags School programme, the Master Composter Classes and the active promotion of water butts and home composters have contributed to a significantly improved performance in terms of waste management throughout the County.

(iv) Challenges

The primary challenge over the next six years is to continue to deliver, maintain and expand high quality waste management infrastructure - which will adequately cater for a growing resident population and business sector – in times of severe financial constraints.

5.1.2.1 Policy Eh2: Waste Management Strategy*

It is Council policy to conform to the European Union and National Waste Management Hierarchy as follows:

- Waste prevention
- Minimisation
- Re-use
- Waste recycling
- Energy recovery and

- **Disposal**

subject to economic and technical feasibility and Environmental Assessment.

The Council's Waste Management Strategy is firmly grounded in EU and National policy and can be summarised by the waste hierarchy of prevention, recycling, energy recovery and disposal.

5.1.2.2 Policy EI13: Waste Plans

It is Council policy to publish plans for the collection, treatment, handling and disposal of waste in accordance with the provisions of the Waste Management Acts 1996 (as amended) and Protection of the Environment Act 2003 (as amended).

In relation to the treatment of waste, Dún Laoghaire-Rathdown County Council is committed to developing a waste management model which conforms to the European Union and National Waste Management Hierarchy. The 'Dublin Regional Waste Management Plan 2005-2010' – is to be comprehensively reviewed in 2014. A new Regional Waste Management Plan for the Eastern and Midlands Region is programmed to be published for the first quarter of 2015. Any waste management policies and objectives contained within the new Regional Plan may require to be reflected within the new County Development Plan 2016-2022 - depending on the chronologies of the two separate documents.

5.1.2.3 Policy EI14: Private Waste Companies

It is Council policy to 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.

Implementation of this Policy will require control and supervision of private waste collection companies by the Council through the mechanism of Waste Collection Permits.



All applications for such permits are processed and reviewed within the National Waste Collection Permit Office, which is based in Offaly County Council. Dún Laoghaire-Rathdown County Council will, nevertheless, have a significant remit in terms of the enforcement of conditions attached to Waste Collection Permits.

5.1.2.4 Policy EI15: Waste Prevention and Reduction*

It is Council policy to promote the prevention and reduction of waste and to co-operate with industry and other agencies in viable schemes to achieve this.

In line with the principles of sustainable development the Council will promote the principle of waste prevention in order to stabilise waste arising and decouple the environmental impacts of waste generation from economic growth. The Council is committed to implementing the objectives of the National Waste Prevention Programme at a local level with businesses, schools, householders, community groups and within the Council's own activities

5.1.2.5 Policy EI16: Waste Re-use and Recycling*

It is Council policy to promote the increased re-use and re-cycling of materials from all waste streams. The Council will co-operate with other agencies in viable schemes for the extraction of useful materials from refuse for re-use or re-cycling and will adopt the National targets as stated in the 'Dublin Regional Waste Management Plan 2005-2010'³.

By agreement with other Local Authorities and agencies, and subject to the availability of finance, it is the intention of the Council to promote the following:

- Source separate waste into organic and non-organic streams or other waste management systems that divert waste from landfill. The objectives will be to maximise the potential for each waste fraction to be reused and recycled or composted and divert organic waste from landfill, in accordance with the 'National Strategy on Biodegradable Waste 2006'.
- Carry out a public information and education campaign on waste recycling techniques and actions.
- Develop a County-wide network of multi-material 'Recycling Centres' and 'Bring Centres' in suitable locations and in accordance with the strategies set out in the 'Waste Management Plan for the Dublin Region 2005-2010', to achieve national targets and to continue to expand the County-wide collection system for domestic recyclable waste. The purpose of the 'Recycling Centres' and 'Bring Centres' is to accommodate the collection of post-consumer

3 Or any subsequently adopted Regional Waste Management Plan.

recyclables from the local neighbourhood and provide onward transfer to a materials recovery or recycling facility.

- Co-operate with other interests in seeking to maximise the recovery and recycling of packaging and priority wastes, as well as the reduction in landfilling of organic waste.

5.1.2.6 Policy EI17: Refuse Disposal*

It is Council policy to dispose of refuse by means of sanitary landfill or other suitable methods as deemed appropriate.

The Council intends that the safe disposal of refuse, which cannot be reused or recycled, shall be carried out by means of sanitary landfill or other suitable methods as deemed appropriate. This approach reflects current European Union and County Council policy, as set out in the 'Waste Management Plan for the Dublin Region 2005-2010' (or its successor). However, in the short term it is recognised that sanitary landfill will remain as the primary method of disposal.

In collaboration with other neighbouring authorities in the Dublin Region, it is intended to utilise the facilities of the waste-to-energy plant being expedited by Dublin City Council before final disposal to landfill.

5.1.2.7 Policy EI18: Hazardous Waste

It is Council policy to co-operate with other agencies, to plan, organise, authorise and supervise the disposal of hazardous waste.

The Council will have regard to the recommendations made by the Environmental Protection Agency, as appropriate, in relation to the effective management by the Council of hazardous waste, including the recommendations of the 'National Hazardous Waste Management Plan 2014-2020'.

5.1.2.8 Policy EI19: Rehabilitation of the Former Ballyogan Landfill

It is Council policy to continue to rehabilitate the former Ballyogan landfill site and following completion of these works the site will open as a new public park (Jamestown Park).

The former Ballyogan landfill - now decommissioned - is located adjacent to the new development areas of Stepside and Kiltiernan/Glenamuck. Remediation works, on foot of the Environmental Protection Agency license requirements have largely been completed. The site still requires some further rehabilitation in relation to overground gas pipes and other ancillary elements of this network. When completed the rehabilitated landfill will offer, over time, both passive and active recreational opportunities for the new neighbourhoods being developed close by.

A Masterplan will be prepared for Jamestown Park which will allow for the lands to be gradually developed on an incremental basis as a recreational facility to serve the community, forming an important linkage between a network of open spaces (Refer also to Policy OSR9, Section 4.2.2.8).

5.1.3 Pollution

5.1.3.1 Policy EI20: Air and Noise Pollution

It is Council policy to implement the provisions of National and EU Directives on air and noise pollution and other relevant legislative requirements in conjunction with other agencies as appropriate.

Air

Dún Laoghaire-Rathdown County Council has adopted the 'Air Quality Management Plan for the Dublin Region 2009-2012' - under the provisions of the Air Pollution Act 1987 - and this Plan will be reviewed in 2015.

The Council has an established Primary Air Quality Station as part of the regional network of stations to monitor the extent of air pollution caused by Nitrogen Dioxide (NO₂) and Particulate Matter under the direction of the Environmental Protection Agency, in accordance with EU policy directives. This network will be extended as required.

Up-to-date information - related to monitoring results - including the Air Quality Index for Health is available at www.epa.ie/air/quality. Dún Laoghaire-Rathdown which is located within the Dublin City Air Quality Index for Health (AQIH) Region currently has a 'Good' air status.

Noise

Dún Laoghaire-Rathdown County Council adopted the 'Dublin Agglomeration Environmental Noise Action Plan 2013-2018' in December 2013.

The Action Plan was developed jointly by the four Local Authorities in the Dublin Region in their role as designated Action Planning Authorities under Article 7 of the Environmental Noise Regulations 2006. These Regulations give effect to the EU Directive 2002/49/EC relating to the assessment and management of environmental noise. The Directive applies to environmental noise (road, rail, aircraft) to which humans are exposed but 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.

Noise can be characterised as unwanted sound or sound that is loud, unpleasant or unexpected and that can eventually cause disturbance, impairment

or damage to health that can impact on the quality of life enjoyed by individuals and communities. The dominant source of noise in the County is traffic noise. Along major transport corridors, the effect of traffic noise on new development must be considered and appropriate measures undertaken to mitigate same.

As a partner in the development of the Noise Action Plan, the Council aims to undertake certain measures including the following:

- Extend the County Sound Monitoring Network and make the data available to the public.
- Identify from strategic noise maps where priority action is required at a local level.
- Implement actions to reduce noise on key traffic routes.

5.1.3.2 Policy EI21: Light Pollution

It is Council policy to ensure that the design of external lighting schemes minimise the incidence of light spillage or pollution in the immediate surrounding environment and has due regard to the residential amenity of surrounding areas.

While adequate lighting is essential in the promotion of a safe and secure environment, light spillage from excessive or poorly designed lighting infrastructure 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 permission, the Council 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 a horizontal plane (Refer also to Sections 8.2.4.4 and 8.2.9.6).

5.1.3.3 Policy EI22: Water Pollution

It is Council policy to implement the provisions of water pollution abatement measures in accordance with National and EU Directives and other legislative requirements in conjunction with other agencies as appropriate.

In implementing this policy Dún Laoghaire-Rathdown County Council will endeavour to:

- Maintain the quality of seawater adjoining the County to the necessary standards, with particular reference to areas of the coastline where bathing takes place. Special emphasis will be devoted to beaches designated under the Quality of Bathing Water Regulations.
- Improve the water quality in rivers and other watercourses in the County, including ground waters.
- Minimise the impact on ground water of discharges from septic tanks and other potentially polluting sources. The Council will comply with the Environmental Protection Agency's 'Code of Practice: Wastewater Treatment and Disposal Systems Serving Single Houses' (2009).



Flood Alleviation Works, Kilgobbet Park

5.1.3.4 Policy El23: Rathmichael Ground and Surface Water Protection

It is Council policy to refuse planning permission for any new developments which include an on-site wastewater treatment facility within the Rathmichael area until the groundwater issues in the area are resolved or ameliorated (See SLO 126 Maps 10, and 14).

This policy will be implemented through the Development Management process through the refusal of planning permission for any new developments - which include an on-site wastewater treatment facility – within the Rathmichael area (See SLO 126 Maps 10, and 14 for the boundary of this area). This policy is necessitated due to the potential impact of un-sewered developments on groundwater and surface water quality and also on the ability of the Council to meet its obligations under the Water Framework Directive.

Proposals for change of use, or alteration to, or extension of, existing approved developments within these areas involving on-site wastewater treatment facilities will be assessed in the context of there being no potential deterioration of ground or surface waters.

5.1.3.5 Policy El24: Litter Control

It is Council policy to ensure that public places, and other areas visible to any extent from public places, within the County are maintained free of litter. It is the policy of the Council to publish plans for the prevention and control of litter and for measures to encourage public awareness with the view to eliminating litter pollution in accordance with the provisions of the Litter Pollution Act 1997.

The Council recognises that litter is a major environmental problem that significantly detracts from the visual quality of urban and rural areas and from the coastline. The Council has recently adopted a statutory 'Litter Management Plan 2014-2017' setting out appropriate objectives and targets for eliminating the litter problem within the County.

5.1.3.6 Policy El25: Major Accidents

It is Council policy to have regard to the provisions of the 'Major Accidents Directive' (European Council Directive 2012/18/EU). This Directive relates to the control of major accident hazards involving dangerous substances and its objectives are to prevent major accidents and limit the consequences of such accidents.

This policy will be implemented through the Development Management process through controls on the siting of new establishments, on modifications to existing establishments and on development in the vicinity of an establishment which, by virtue of its type or siting, is likely to increase the risk or consequences

of a major accident. At present, however, there are no 'Seveso' sites (defined within the 'COMAH Regulations as 'locations where significant quantities of dangerous substances are stored') within Dún Laoghaire-Rathdown.

5.1.4 Specific Objectives and Policies

(i) Water Supply Objectives

It is an objective of the Council to facilitate and support Irish Water in the delivery and maintenance of the water supply projects listed in Table 5.1.1. It is also an objective of the Council to actively promote the implementation of the following projects with Irish Water:

- Rehabilitation of the water network.
- Sandyford High Level Scheme Distribution Mains.
- Control of Plumbosolvency (Lead Reduction) levels.
- Construction of new water mains and services to the front of houses which are currently dependent on communal water mains in back gardens.

(ii) Wastewater and Drainage Objectives

It is an objective of the Council to facilitate and support Irish Water in the delivery and maintenance of the wastewater projects listed in Table 5.1.1. It is also an objective of the Council to actively promote the implementation following projects with Irish Water:

- Dún Laoghaire Main Drainage Scheme.
- Carrickmines/Shanganagh Main Drainage Scheme.

(iii) Waste Management Objectives

It is an objective of the Council to continue the implementation of the following project, as and when necessary, and subject to the availability of appropriate approval and finance:

- Ballyogan Recycling Park.

The Council intends completing the integrated Waste Management Centre at Ballyogan Recycling Park. This includes the ongoing maintenance of the civic waste facility, the provision of a large public amenity space, the installation of an organic waste composting area and the provision of a materials recovery/recycling facility.



dlr Road Sweeper and Gritter

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5.1.5 Statutory Undertakers and Telecommunications Policies

5.1.5.1 Policy El26: Energy Facilities

It is Council policy to encourage the provision of energy facilities in association with the appropriate service providers and in accordance with 'Government Policy Statement on Strategic Importance of Transmission and Other Energy Infrastructure' (2012). In addition the Council will facilitate the expansion of the existing service providers, notably Bord Gáis, Eirgird and the Electricity Supply Board (ESB), in order to ensure satisfactory levels of supply and to minimise constraints for development.

The provision of a wide range of energy facilities will ensure that the needs of all sectoral interests in the County can be provided for in a sustainable fashion. The Council will be open to the future requirements of the major service providers, such as Bord Gáis, Eirgird and the ESB, where it is proposed to enhance or upgrade existing facilities or networks.

It is a general objective, where strategic route corridors have been identified, to support the statutory providers of national grid infrastructure by safeguarding such strategic corridors from encroachment by other developments that might compromise the provision of energy networks.

5.1.5.2 Policy El27: Overhead Cables

It is Council policy to seek the undergrounding of all electricity, telephone and television cables wherever possible, in the interests of visual amenity and public health.

Overhead cables detract from visual amenity and therefore it is Council policy to seek the placing underground of cables. It is the intention of the Council to co-operate with other agencies as appropriate, and to use its development management powers in the implementation of this policy.

5.1.5.3 Policy El28: Telecommunications Infrastructure

It is Council policy to promote and facilitate the provision of an appropriate telecommunications infrastructure, including broadband connectivity and other technologies, within the County.

The widespread availability of a high quality telecommunications network throughout Dún Laoghaire-Rathdown will be critical to the development of a knowledge economy, will help attract inward investment in hi-tech knowledge based industries and will engender the image of the County as the premier entrepreneurial County in the State.

The advantages of a high quality telecommunications network must, however be, balanced against the need to safeguard the rural and urban environment, particularly in sensitive areas where the impacts on residential amenity and visual amenity of areas needs to be adequately assessed.

5.2 Climate Change, Energy Efficiency and Flooding

5.2.1 Climate Change Mitigation and Adaptation

In line with global trends, Ireland's climate is changing and the scientific consensus is that more changes are inevitable. The changes are directly related to man-made greenhouse gas emissions. There is also an economic consensus that the cost of inaction will greatly outweigh the cost of action, and that progressive Climate Change policies, based on innovation and investment in low-carbon technology, are consistent with global economic growth.

It is accepted that action is required to manage and deal with Climate Change impacts. Measures to deal with Climate Change can be defined as either mitigation measures or adaptation measures.

Mitigation is defined as action to reduce emissions of greenhouse gases (DoECLG, 2012). Mitigation measures include green building measures and the delivery of more compact, less carbon intensive forms of development.

Climate Change Adaptation refers to *"the adjustment or preparation of natural or human systems to a new or changing environment, with the aim of moderating harm or exploiting beneficial opportunities"* (DoECLG).

Examples of adaptation measures include but are not limited to flood Risk Assessment and Management. Within this County Development Plan policies which are Climate Change mitigation and/or adaptation measures have been marked with an asterix thus *

5.2.1.1 Policy CC1: National Climate Change Adaptation Framework.*

It is Council policy to implement the 'National Climate Change Adaptation Framework - Building Resilience to Climate Change' by supporting the preparation of a Climate Change Adaptation Plan.

In 2012 the DoECLG published the 'National Climate Change Adaptation Framework - Building Resilience to Climate Change'. The Department has been identified in this Framework as the lead body on National Adaptation Policy. Local Authorities have been given the role to prepare Local Adaptation Plans through the Development Plan Review process. National guidance in relation to the preparation of Climate Change Adaptation Plans is still to be prepared. The new Climate Action and Low Carbon Development Bill is of relevance.

It is envisaged that the preparation of a Dún Laoghaire-Rathdown Adaptation Strategy will, in due course, be carried out by an interdisciplinary team, in liaison with



Storm Damage, Shanganagh Park

relevant stakeholders and that the resultant plan will become part of the County Development Plan 2016 – 2022 by way of a post-adoption Variation.

The Adaptation Plan will ensure that Climate Change Adaptation measures are embedded into all relevant sections of the Development Plan - including those sections on promoting the use of alternative and renewable energy sources, sustainable built environment, sustainable transport through reductions in the use of the private car, flood risk assessment, biodiversity and land use planning.

As an interim measure the previous Dún Laoghaire-Rathdown County Development Plan 2010-2016 has been assessed to identify Climate Change issues pertaining to Climate Change adaptation and mitigation present in that Plan. Where gaps were identified additional policies are recommended for inclusion in this current 2016–2022 Plan. It was concluded that many of the policies in this Development Plan aimed at achieving a sustainable County can be regarded as policies which are also intrinsically Climate Change adaptation or mitigation measures.

5.2.1.2 Policy CC2: Development of National Climate Change Policy and Legislation.*

It is Council policy to support on an ongoing basis the Government programme for the development of a National Climate Change Policy and Legislation through the inclusion and implementation of supporting and complementary County Development Plan policies.

In January 2012 the Government initiated a two-year programme for the development of ‘National Climate Change Policy and Legislation’. The Department of the Environment, Community and Local Government is currently preparing the Climate Action and Low Carbon Development Bill due to go before the Oireachtas imminently. The 2014 DoECLG Climate Action and Low Carbon Development National Position Policy paper sets 2050 as the target year for the reduction of greenhouse gas emissions and will put in place a framework to meet European Union and International commitments on Climate Change.

The fundamental objective encapsulated by this document is to achieve transition to a competitive, low-carbon, climate resilient and environmentally sustainable economy by 2050.

The Government Programme has also resulted in the publication of a report by the National Economic and Social Council (NESC) entitled ‘Ireland and the Climate Change Challenge: Connecting How Much with How To’ (2012).

The National vision encapsulated by this document is for a carbon-neutral society by 2050, based on an approach to economic development that is socially and environmentally sustainable.

5.2.2 Energy Efficiency

5.2.2.1 Policy CC3: Development of National Energy Policy and Legislation.*

It is Council policy to support on an ongoing basis the Government Programme for the development of Energy Policy and Legislation through the implementation of supporting policies in this County Development Plan - particularly those promoting use of renewable energy sources, energy efficiency, sustainable transport and land use planning.

Ireland is committed to a range of renewable energy and efficiency targets, many of which are being implemented as Climate Change policy measures to reduce carbon emissions. At a European level, the ‘20/20/20’ commitments agreed under the EU ‘Climate Change and Energy Package’ set three new targets for 2020:

- A minimum 20% reduction in greenhouse gas emissions based on 1990 levels.
- 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.
- 20% of final energy consumption to be produced by renewable energy resources.

Under the European Renewables Directive, the National 2020 target for Ireland is to source 16% of all energy consumed from renewable sources. In addition, Ireland must achieve a 10% share of renewable energy in transport consumption by 2020 (known as RES-T).

5.2.2.2 Policy CC4: Sustainable Energy Action Plan*

It is Council policy, in consultation with relevant stakeholders, to prepare a ‘Sustainable Energy Action Plan’.

Ireland published the first ‘National Energy Efficiency Action Plan’ (NEEAP) in 2009. The exemplary role of the public sector was identified as a key factor for Ireland to achieve the EU’s 2020 Energy Efficiency targets. The NEEAP stated that *“The public sector will improve its energy efficiency by 33% and will be seen to lead by example – showing all sectors what is possible through strong, committed action.”*

Leading by example Dún Laoghaire-Rathdown has a two-fold obligation as follows:

- To address in-house energy consumption and be in compliance with relevant energy efficiency directives.
- To future proof the County from an energy perspective in liaison with relevant stakeholders.



Dún Laoghaire-Rathdown established a cross-departmental Energy Team in 2010 and participated in Sustainable Energy Authority of Ireland's (SEAI) public sector pilot project to measure and record in-house energy consumption prior to the National collection of energy data. The Council is affiliated to a number of Inter-County organisations and Governmental agencies tasked with promoting good energy governance. The Council aims to further strengthen compliance with good energy management practice within the County Development Plan period, as set out in SI 426 of 2014 which gives effect to Energy Efficiency Directive 2012/27/EU.

The Council will aim to future-proof the County from an energy perspective through the preparation of a 'Sustainable Energy Action Plan'. An interdisciplinary team, in liaison with relevant stakeholders will prepare the recommendations arising from this Action Plan.

5.2.2.3 Policy CC5: Limiting Emissions of Greenhouse Gases.*

It is Council policy to support National and International initiatives for limiting emissions of greenhouse gases.

This will be addressed in a number of ways including, but not limited to, the promotion of sustainable transport and travel and sustainable development and construction. It is important that all new building development employ materials with a low embodied energy, preferably sourced from local sustainable sources and ultimately readily capable of being recycled.

5.2.3 Energy Efficient Design

Two European Directives 2010/31/EU 'Energy Performance of Buildings Directive' and 2012/27/EU 'Energy Efficiency Directive' will inform National energy policy for the immediate future.

Energy Performance of Buildings Directive, promotes

"...the improvement of the energy performance of buildings...taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness."

The Directive also outlines policy for increasing the number of 'near Zero Energy Buildings' (nZEB) within each Member State. A 'near zero energy building' is defined as:

"A building that has a very high energy performance, as determined in accordance with Annex 1. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby,"

Constructing less carbon-intensive forms of development will build resilience to Climate Change. This also negates concerns related to security of fossil fuel supply and the rising costs as a result of the limited future availability of fossil fuel.

Much of the existing built fabric, which will last until 2050 or beyond, has already been constructed and the residual available land zoned for development is a finite resource. In order to meet National energy

targets and increase the aggregate energy level, all new development should conform to the highest standard possible.

The primary focus with regard to the efficient use of energy and natural resources is to design buildings that create a thermally-efficient building envelope. Such buildings will make optimum use of free heat gains in order to minimise the requirement of space heating and, in turn, will retain this heat gain through a high standard of insulation and heat recovery systems. Where required, the use of on-site 'micro renewables' or district heating systems can offer significant opportunities.

In support of the DoECLG Climate Action and Low Carbon Development National Position Policy Paper it is the vision of the Council to become a carbon neutral County. Policies CC6, CC7 and CC8 below support this vision.

5.2.3.1 Policy CC6: Energy Performance in Existing Buildings *

It is Council policy to promote innovative building design that demonstrates a high level of energy conservation, energy efficiency and use of renewable energy sources in existing buildings.

Dún Laoghaire-Rathdown is committed to encouraging more sustainable development, the efficient use of energy and the use of renewables in refurbishment and extension projects.

The Council shall have regard to DoECLG 'Towards nearly Zero Energy Buildings in Ireland' and the EU Directive 2010/31/EU 'Energy Performance of Buildings Directive', which promote the increase of near Zero Energy Buildings (nZEB). The Council will, where appropriate, promote development in existing buildings to reach low carbon standards.

Building to nZEB standard provides better build quality, energy conservation through improved building fabric, use of on-site renewable energy and thereby reduction of demand on grid, increases security of supply within the County and security of energy cost as well as minimising emissions.

In cases where the building is of architectural or historic interest, it may not be possible to meet these values, such work should endeavour to meet the principles of nZEB design.

5.2.3.2 Policy CC7: Energy Performance in New Buildings.*

It is Council policy that all new buildings will be required to meet the passive house standard or equivalent, where reasonably practicable. By equivalent we mean approaches supported by robust evidence (such as monitoring studies) to demonstrate their efficacy, with particular regard to

indoor air quality, energy performance, comfort, and the prevention of surface/interstitial condensation. Buildings specifically exempted from BER ratings as set out in S.I. No 666 of 2006 are also exempted from the requirements of CC7. These requirements are in addition to the statutory requirement to comply fully with Parts A-M of Building Regulations.

Dún Laoghaire-Rathdown is committed to a pro-active approach to raising the energy efficiency standards of the building stock of the County.

Climate Change affects us all. Dealing with Climate Change means ensuring the efficient use of available energy and placing maximum priority on saving energy. Local authorities have an important role in encouraging every individual and community within the County to play their respective part in promotion of climate protection.

The 2014 DoECLG 'Climate Action and Low Carbon Development National Position Paper' outlines the National objective as a transition to a competitive, low carbon, climate resilient and environmentally sustainable economy by 2050. Given the long lead in time for new development, the policy advocates designing and building to improved standards now. .

On average, about 40% of the total energy consumption in industrialised countries is used for buildings. Due to the long service life of buildings, a consistent approach is especially important in this respect in improving energy standards at the earliest design stages. Significantly improving energy efficiency standards at the outset could prove cost optimal as any additional costs can be recouped over the life cycle of the building. Improvement in the energy efficiency of buildings should be encouraged as it will have a considerable impact on the overall assessment of the County in terms of energy.

The Sustainable Energy Authority of Ireland (SEAI) in conjunction with the National Standards Authority of Ireland (NSAI) has developed and published IS 399:2014 Energy Efficient Design Management – Requirements with Guidance for Use. IS 399 is a tool to demonstrate achievement of exemplary energy efficient design and to ensure consideration of energy design at the earliest stage in the design process.

Dún Laoghaire-Rathdown is committed to encouraging more sustainable development, the efficient use of energy and the use of renewables in new buildings. The Council shall have regard to the DoECLG 'Towards Nearly Zero Energy Buildings in Ireland' (2012) and the EU Directive 2010/31/EU 'Energy Performance of Buildings Directive' which promote the increase of near Zero Energy Buildings (nZEB). The Council in addition supports the integrated energy concept of Passive House that will result in high quality constructed, economic, comfortable and healthy future proofed buildings.

The Council will promote development in new buildings to reach near Zero Energy Build and/or Passive House standard. The current National

standard energy rating methodology and software may be used to certify any nZEB developments and the PHPP certification software may be used to design and certify works to Passive House standard.

The 'Towards Nearly Zero Energy Buildings in Ireland - Planning for 2020 and Beyond' (DoECLG) envisages nZEB provisions for new dwellings will be in place - via incremental changes to the Building Regulations – by 2020 (Refer also Section 8.2.10.3).

5.2.3.3 Policy CC8: Excellence in the Built Environment.*

It is Council policy to lead by example by developing a strategy for effective climate protection within its building stock.

In compliance with EU Energy Efficiency Directives of 2014, the Council will develop a strategy to promote the exemplary role of the public sector in demonstrating excellence within the built environment. Included in this strategy the Council will establish procedures and develop case studies to achieve best practice in relation to buildings of architectural or historical interest. It is the intention of this policy to develop this strategy within the period of this County Development Plan. (Refer also to Section 2.1.3.8 Policy RES8).

5.2.3.4 Policy CC9: Sustainability in Adaptable Design*.

It is Council policy to promote sustainable approaches to the improvement of standards for habitable accommodation, by allowing dwellings to be flexible, accessible and adaptable in their spatial layout and design.

It is important that the design of individual buildings facilitate a good quality of life for residents and secures long-term sustainability of the overall development. The design of new residential developments should consider not just the immediate needs of the prospective occupants but also their possible changing needs over the life of the building.

5.2.3.5 Policy CC10: Radon Gas

It is Council policy, in partnership with other relevant agencies, to promote best practice in the implementation of radon prevention measures.

The Radiological Protection Institute of Ireland (RPII), in a recent survey of over 2,200 houses in the Dublin Metropolitan found that, on average, 6% of dwellings exceed the National Reference Levels of radon gas.

Technical Guidance Document C of the current Building Regulations provides technical information on the importance of radon prevention measures within dwellings and how they should be installed effectively. In an era of increasing sustainability of



Roof Top Solar Panels, Dún Laoghaire

design and air tightness of construction systems, it is increasingly important that correct measures to deal with radon gas are fully implemented at the preliminary design stage.

5.2.4 Renewable Energy

5.2.4.1 Policy CC11: Renewable Energy and Energy Networks.*

It is Council policy to support National and International initiatives to encourage the development and use of renewable energy sources.

The Council encourages the use of renewable energy resources including photovoltaic, biomass, off-shore wind, domestic wind, hydro and tidal where appropriate. These sources can offer sustainable alternatives to fossil fuels which, in turn, can reduce greenhouse gas emissions and dependency on imported fuels. Use of district heating systems, geothermal, air-to-water heat pumps and solar water heating panels are further encouraged. Installation of energy networks at development stage will allow for ease of future change as technology develops and mitigates against dependency on fossil fuels. This will build resilience in maintaining energy supply and will safeguard from an economic perspective. The Council will support and encourage the development of district energy and community co-op projects as a way of contributing to meeting the National 2020 renewable energy targets and encouraging local employment.

5.2.4.2 Policy CC12: Wind and Wave Energy*.

It is Council policy to support and promote, in conjunction with other relevant agencies, wind energy initiatives – both on-shore and offshore – when these are undertaken in an environmentally acceptable manner.

It is acknowledged that wind and wave energy as renewable energy sources could have an important role to play in achieving National targets in relation to reductions in fossil fuel dependency and, by implication, greenhouse gas emissions. The Government's 'Wind Energy Development Guidelines for Planning Authorities' (2006) sets out a detailed methodology to help identify optimum locations for the development of commercial wind generating facilities. The 2010 - 2016 County Development Plan included an analysis of wind speeds and the sensitive landscapes of the County at a broad level, and their relationship to the existing electricity grid network was undertaken. It was concluded that there was no realistic or practical potential for economic

on-shore wind farm development in the County without significant and overriding adverse visual and environmental impacts. This earlier analysis has been subsequently updated to take cognisance of recent changes to Government Guidelines on Wind Energy. The same conclusions in relation to there being no practical potential for economic on-shore wind farm development in the County were reaffirmed. (Refer also to Appendix 6).

The Council remains supportive of offshore wind energy initiatives and will cooperate with the Department of Communications, Energy and Natural Resources in any practical fashion in relation to the implementation of additional wind and wave projects in the Irish Sea, subject, as always, to compliance with the Habitats Directive.

5.2.4.3 Policy CC13: Small-Scale Wind Energy Schemes*.

It is Council policy to encourage small-scale wind energy developments within industrial areas, and support small community-based proposals in urban areas provided they do not negatively impact upon the environmental quality or residential amenity of the area.

Dún Laoghaire-Rathdown will encourage domestic households in appropriate locations to install micro wind energy units. Central Government support to such small-scale renewable energy projects is implicit in the various planning exemptions provided for under the Planning and Development Regulations 2007.

5.2.5 Flood Risk

One of the effects of Climate Change that can be anticipated, and a key Climate Change adaptation issue, is the management of water and the maintenance of quality standards as the global temperature increases and rainfall patterns change. Flood risk needs to be considered at all stages of the land use planning process and managed in an environmentally sensitive way. The Government publication 'Flood Risk Management Guidelines', (2009), intends to ensure a more rigorous and systematic approach to integrating flood risk management in the preparation of Development Plans, Local Area Plans and in the determination of individual planning applications.

5.2.5.1 Policy CC14: Catchment Flood Risk Assessment and Management (CFRAM)*.

It is Council policy to assist the Office of Public Works (OPW) in the preparation of the Regional Catchment

Flood Risk Assessment and Management (CFRAM) Study being carried out for the Eastern District. Any recommendations and outputs arising from the CFRAM study for the Eastern District that are relevant for Dún Laoghaire-Rathdown will require to be incorporated into the Development Plan.

The CFRAM programme commenced in Ireland in 2011. The programme delivers on core components of the National Flood Policy and on requirements of the EU Flood Directive. The CFRAM programme involves 3 phases: (i) Preliminary Flood Risk Assessment, (ii) CFRAM Studies on-going and (iii) Implementation and Review.

The Eastern District CFRAM Study commenced in 2011 to (i) assess flood risk through the identification of flood hazard areas, (ii) identify viable structural and non-structural measures and options for managing the flood risk, and (iii) prepare a Flood Risk Management Plan (FRMP) and Strategic Environmental Assessment that sets out the measures and policies to be pursued.

The Council will actively work with the CFRAM Programme and any catchment-based Flood Planning Groups where catchments extend beyond the County's administrative boundary, in the development and implementation of catchment-based strategies for the management of flood risk.

5.2.5.2 Policy CC15: Flood Risk Management*.

It is Council policy to support, in cooperation 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 the Department of the Environment, Heritage and Local Government and the Office of Public Works Guidelines on 'The Planning System and Flood Risk Management, (2009)' and relevant outputs of the Eastern District Catchment and Flood Risk Assessment and Management Study (ECFRAMS Study).

The Council will ensure the implementation of the DoEHLG/OPW Guidelines 'The Planning System and Flood Risk Management', (2009) and DoECLG Circular Pl2/2014 (or any updated/superseded document) in relation to flood risk management within 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 13).

Implementation of the Guidelines will include the following:

- Avoid, reduce and/or mitigate, as appropriate, in accordance with the Flood Risk Management Guidelines, the risk of flooding within the flood risk areas indicated in the ECFRAM study and the Strategic Flood Risk Assessment of the County and any other flood risk areas that may be identified during the period of the Plan or in relation to



Coastline at the 40 Foot

a planning application (Refer to Section 6 of Appendix 13).

- Development proposals in areas where there is an identified or potential risk of flooding or that could give rise to a risk of flooding elsewhere must be accompanied by a Site-specific Flood Risk Assessment, and Justification Test where appropriate, (Refer to Development Management section 8.2.10.4 and Appendix 13 SFRA for further detail).
- Development that would be subject to an inappropriate risk of flooding or that would cause or exacerbate such a risk at other locations shall not normally be permitted.
- Where certain measures proposed to mitigate or manage the risk of flooding associated with new developments are likely to result in significant effects to the environment or European sites downstream, such measures will undergo environmental assessment and Habitats Directive Assessment, as appropriate.
- Flood Risk Management and Strategic Flood Risk Assessment (SFRA) shall be incorporated into the preparation of all Local Area Plans and any other lower tier plans.
- Regard shall be had to any future flood hazard maps, flood risk maps and flood risk management plans prepared as part of the Eastern District Catchment Flood Risk Assessment and Management Study and future iterations of other similar studies of impacts of climate change.
- Where flood protection or alleviation works take place the Council will ensure that the natural and cultural heritage and rivers, streams and watercourses are protected and enhanced.
- Existing wetland Habitats within the County which serve as flood protection/management measures shall be managed and enhanced.
- The Council will also require that all proposed flood protection or alleviation works will be subject to Appropriate Assessment (AA) to ensure there are no likely significant effects on the integrity, defined by the structure and function, of any Natura 2000 sites and that the requirements of Article 6 of the EU Habitats Directive are met.

5.2.5.3 Policy CC16: Cross-Boundary Flood Management.

It is Council Policy to work with neighbouring Local Authorities when developing cross-boundary flood management work programmes and when considering cross boundary development.

5.2.5.4 Policy CC17: Coastal Defence*.

It is Council policy to implement and have regard to the recommendations of the Coastal Defence Strategy (2010) for the County where feasible. The Council will endeavour to obtain funding from the Office of Public works in order to undertake defence measures for specific areas as prioritised in the Strategy.

A Coastal Defence Strategy Study was prepared for the County by specialist Consulting Engineers in 2010. The Study details a coastal protection strategy identifying specific coastal protection measures on a priority basis and undertakes a risk assessment of the vulnerability of the Study area and hinterland to both erosion and coastal flooding. The Study provides a framework for decision making in relation to development along the coast.

Risk mechanisms along the coastline were identified as erosion, cliff instability, tidal flooding, wave overtopping and wave flooding. Thirty four areas at risk were identified along the Study coastline. Erosion and cliff instability apply to the coastline

south of Sorrento Point and to localised areas to the north. To the north of Sorrento point the principal risk mechanisms are due to wave impact and wave overtopping. Tidal flooding during extreme events may occur to parts of the DART rail line between Dún Laoghaire Harbour and Merrion Gates, particularly in the vicinity of Blackrock Station.

During the course of the Study, areas were identified where it was considered that the risks relating to coastal defence issues were likely to be highest. Measures to be applied to these specific areas were prioritised. Not all of these areas are in the ownership of the Council. The Study also recommends that the findings be adopted into the County Development Plan.

The Council will also require that all coastal defence works will be subject to Appropriate Assessment (AA) to ensure there are no likely significant effects on the integrity of any Natura 2000 sites and that the requirements of Article 6 of the EU Habitats Directive are met.



Coastal Defence Gabions, Killiney Beach