

Dublin City Development Plan 2016–2022

Strategic Environmental Assessment



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Dublin City Development Plan 2016–2022

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List of Abbreviations

AA	Appropriate Assessment
ACA	Architectural Conservation Area
BAP	Biodiversity Action Plan
BOD	Biological Oxygen Demand
DCDP	Dublin City Development Plan
CFRAMS	Catchment Flood Risk and Management Studies
CHP	Combined Heat and Power
COD	Chemical Oxygen Demand
CSO	Central Statistics Office
CSOs	Combined Sewer Overflows
DCFPP	Dublin Coastal Flood Protection Plan
DAHRRGE	Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
DCENR	Department of Communications, Energy and Natural Resources
DCCAE	Department of Communications, Climate Action and Environment
DCIHR	Dublin City Industrial Heritage Record
DEHLG	Department of Environment, Heritage and Local Government
DHPCLG	Department of Housing, Planning, Community and Local Government
CO₂	Carbon Dioxide
DBTF	Dublin Bay Task Force
DTO	Dublin Transport Organisation
EC	European Commission
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EPO	Environmental Protection Objective
ER	Environmental Report
ERDB	Eastern River Basin District
ESB	Electricity Supply Board
EU	European Union
FSD	Framework for Sustainable Dublin
GDA	Greater Dublin Area
GSDSDS	Greater Dublin Strategic Drainage Study
GHGs	Green House Gases
GIS	Geographical Information Systems
GSI	Geological Survey of Ireland
KDC	Key District Centre
LAP	Local Area Plan
LCA	Landscape Conservation Area
NDP	National Development Plan
NHA	Natural Heritage Area
NIAH	National Inventory Architectural Heritage
NO_x	Nitrogen Oxides
NPWS	National Parks and Wildlife Service
NSS	National Spatial Strategy
NTS	Non-Technical Summary

OPW	Office of Public Works
pNHA	Proposed Natural Heritage Area
PM₁₀	Particulate Matter
POM	Programme of Measures
QBC	Quality Bus Corridor
QBN	Quality Bus Network
RBMP	River Basin Management Plan
RPGs	Regional Planning Guidelines
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
SAAO	Special Amenity Area Order
SAC	Special Area of Conservation
SAFER	Strategies and Actions for Flood Emergency Risk Management
SFRAs	Strategic Flood Risk Assessments
SPA	Special Protection Area
SEA	Strategic Environmental Assessment
S2S	Sutton to Sandycove (promenade and cycleway)
SUDS	Sustainable Urban Drainage Systems
TPO	Tree Protection Order
WFD	Water Framework Directive
WSSA	Water Services Supply Area
WSSP	Water Services Strategic Plan
WWTP	Waste Water Treatment Plant

Non-technical Summary

Introduction

This Environmental Report has been prepared as part of the Strategic Environmental Assessment (SEA) of the Dublin City Development Plan 2016–2022 (hereafter referred to as the Development Plan), in accordance with national and EU legislation. SEA is a systematic method of considering the likely significant environmental effects of a plan or programme by integrating environmental factors into the development of the Development Plan and related decision-making.

The purpose of this Environmental Report is to: a) inform the development of the Development Plan; b) identify, describe and evaluate the likely significant effects of the Development Plan and its reasonable alternatives; and c) provide an early opportunity for the statutory authorities and the public to offer views through consultation.

SEA Methodology

SEA is a process for evaluating, at the earliest appropriate stage, the environmental effects of plans or programmes before they are adopted. It also gives the public and other interested parties an opportunity to comment and to be kept informed of decisions and how they were made. An early consideration of environmental concerns in the planning process creates an opportunity for environmental factors to be considered explicitly alongside other factors such as social, technical or economic aspects. The European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive) was transposed into national legislation through S.I. 435 of 2004 and S.I. 436 of 2004, as amended by S.I. 200 and S.I. 201 of 2011.

This Environmental Report contains the findings of the assessment of the likely significant effects on the environment of implementing the Development Plan. It reflects the requirements of the SEA Directive and has been conducted under S.I. 436 of 2004, as amended. The stages followed in the SEA are summarised in Figure 0.1.

Figure 0.1: Summary of SEA Stages



Integration of the SEA and the Development Plan was achieved through close involvement of relevant team members in all stages of the project, including SEA scoping; review of the existing situation; and public consultation. The SEA and Development Plan teams also participated in a number of workshops and meetings in relation to developing the: SEA assessment methodology; alternatives to be considered in the SEA; SEA environmental protection objectives, targets and indicators; and mitigation measures and monitoring strategies.

SEA Scoping

The objective of scoping is to identify key issues of concern that should be addressed in the environmental assessment of the draft Development Plan so that they can be considered in appropriate detail. Scoping also helps determine the boundaries of the assessment in terms of geographical extent and the time horizon for the assessment.

To inform this process, in 2014 Dublin City Council put together an Issues Paper to highlight the strategic priority issues for the city over the next six years. A period of public consultation ran from 10 November 2014 – 14 January 2015, where citizens, communities and organisations were invited to read through these issues and make observations. These were collated and reviewed by the Development Plan team.

A Scoping Report was then prepared and published on 30 March 2015. Consultation was carried out with the statutory consultees (Environmental Protection Agency; Department of Communications, Energy and Natural Resources; Department of the Environment, Community and Local Government; Department of Arts, Heritage and the Gaeltacht; and the Department of Agriculture, Food and the Marine, and Managers of the adjoining planning authorities). Taking into consideration feedback from consultees, an assessment of the potential for the draft Development Plan to influence the environment was carried out.

All of the environmental topics listed in the SEA Directive have been scoped in for the assessment of the Development Plan. These include:

- Population and Human Health;
- Biodiversity, Flora and Fauna;

- Air Quality and Noise;
- Climate;
- Landscape;
- Soils and Geology;
- Water;
- Material Assets; and
- Cultural Heritage (including architectural and archaeological heritage).

Appropriate Assessment (Natura Impact Report)

Appropriate Assessment (AA) of the Plan has been conducted in line with the requirements of Article 6(3) of the EU Habitats Directive (92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora; the Planning and Development Act 2000 (Part XAB) (as amended); and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011).

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the Habitats Directive, provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as European Sites (Natura 2000 network). These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC) as codified by Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European Sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

Article 6(3) states:

Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) states:

If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

These articles, together with the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) and the Planning and Development Act 2000–2014 (Part XAB), mean that where the implementation of the Development Plan has potential to have a significant effect on a European Site, the relevant Local Authority (in this case Dublin City Council) must ensure that an appropriate assessment is carried out in view of that site's conservation objectives.

The Development Plan has undergone screening for AA in a parallel process to the SEA and it was determined that an appropriate assessment was required, the findings of which are presented in the Natura Impact Report. The appropriate assessment has been used to guide the development of policies and objectives.

Strategic Flood Risk Assessment

In accordance with Government guidelines 'The Planning System and Flood Risk Management' a Strategic Flood Risk Assessment (SFRA) has been prepared as part of the Development Plan-making process. The SFRA has provided an area-wide assessment of all types of flood risk to inform strategic land use planning decisions. The SFRA enables the Dublin City Council (DCC) to apply the sequential approach, including the Justification Test, allocate appropriate sites for development and identify how flood risk can be reduced as part of the Development Plan process. The SFRA Report accompanies the Development Plan. **(See Volume 7)**

Content of the Development Plan

The Development Plan is a plan for Dublin City and as such the assessment has been limited geographically to activities occurring

within the functional area of the Development Plan. The Development Plan will cover the period from 2016 up to 2022. Based on the requirements of the legislation and guidance, the information in is provided in the Environmental Report.

Table 1: Information Provided in the Environmental Report

Item	Information to be Contained in the Environmental Report	Relevant Section of the Report
A	An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes.	Chapter 03: Context of the Dublin City Development Plan 2016–2022
B	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme.	Chapter 04: Baseline Environment
C	The environmental characteristics of areas likely to be significantly affected.	Chapter 04: Baseline Environment
D	Any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or the Habitats Directive.	Chapter 03: Context of the Dublin City Development Plan 2016–2022 Chapter 04: Baseline Environment
E	The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation.	Chapter 03: Context of the Dublin City Development Plan 2016–2022 Chapter 05: Environmental Protection Objectives
F	The likely significant effects* on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	Chapter 07: Evaluation of Development Plan Alternatives Chapter 08: Evaluation of the Dublin City Development Plan 2016–2022
G	The measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment of implementing the plan or programme, or modification to a plan or programme.	Chapter 09: Mitigation Chapter 10: Monitoring
H	An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken, including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Chapter 02: SEA Methodology Chapter 04: Baseline Chapter 06: Alternative Scenarios Chapter 07: Evaluation of Alternative Scenarios
I	A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme.	Chapter 09: Mitigation Chapter 10: Monitoring
J	A non-technical summary of the information provided under the above headings.	Non-Technical Summary

*These effects should include secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects.

Context of Dublin City Development Plan

The Dublin City Development Plan 2016–2022 (the Plan) sets out the spatial framework for the city for a given specified period of time. Under the Planning and Development Act 2000 (as amended), the Planning Authority is obliged to prepare a development plan for its functional area every six years.

The Plan seeks the long-term spatial framework for the sustainable development of the city to ensure an improved quality of life for its citizens.

The vision of the Plan is:

Within the next 25 to 30 years, Dublin will have an established international reputation as one of Europe's most sustainable, dynamic and resourceful city regions. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse, smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbourhoods, all connected by an exemplary public transport, cycling and walking system and interwoven with a quality bio-diverse green space network. In short, the vision is for a capital city where people will seek to live, work, experience, invest and socialise, as a matter of choice.

Our 30 year vision is for a zero carbon city with all energy coming from renewable energy sources. All buildings will have been built or retrofitted to near zero energy building standards, which will provide comfortable,

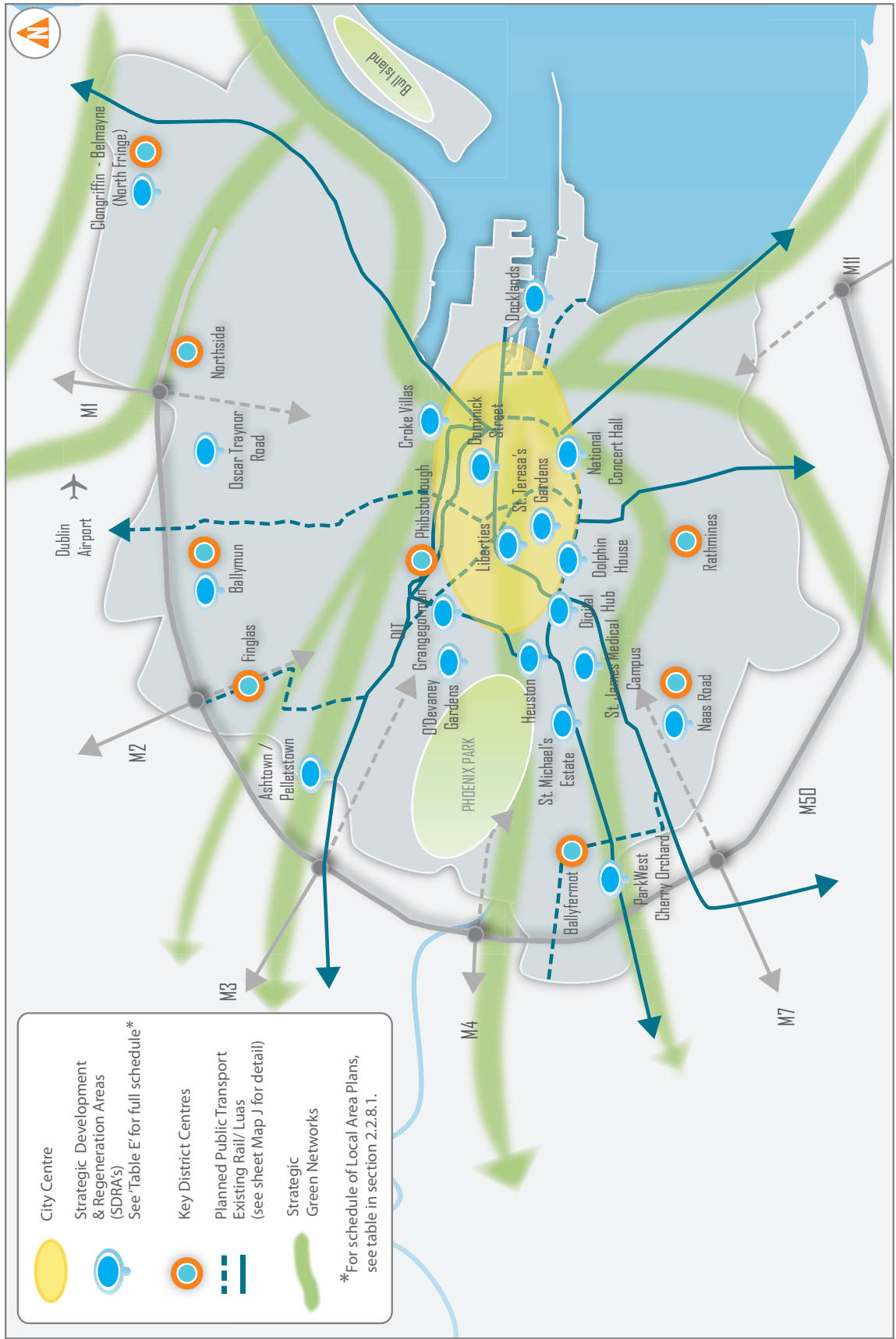
warm living and working environments. We will halve the use of 'conventionally – fuelled cars in urban transport by 2030 and phase them out by 2050; achieve essential CO₂-free city logistics in Dublin by 2030. Within 30 years we will move close to zero fatalities in road transport. In line with this goal, we will aim to halve road casualties by 2022. This Council will work with its neighbouring local authorities and the National Transport Authority to achieve a doubling of all active travel and public transport trips and to halve private vehicular trips to Dublin by 2030.

The Core Strategy of the Plan sets out to achieve the vision in a manner that is consistent with the guidance, strategies and policies at national and regional level, in particular the National Spatial Strategy (NSS) 2002–2020, the Regional Planning Guidelines (RPGs) for the Greater Dublin Area 2010–2022 and the government's Smarter Travel – A Sustainable Transport Future 2009–2020, all guide and direct the city councils housing, settlement and retail strategies. It has been informed by the Strategic Environmental Assessment and the Appropriate Assessment, which were undertaken as a parallel process in tandem with the development of the plan.

All of the policies and objectives set out in the Plan flow from, and are consistent with, these higher level national and regional policies in that they promote intensification and consolidation of Dublin city, all of which lies within the metropolitan area, as outlined in the RPGs. The Plan identifies specific policies and objectives applicable to Dublin city in order to facilitate land use in a manner that will promote proper planning and sustainable development.

The National Spatial Strategy (NSS) sets out the strategic planning framework for the future development of Ireland. It recognises

Core Strategy Map



that Dublin, as the capital city, plays a vital national role and that the performance of its economy is essential to the success and competitiveness of the national economy. In order to sustain this role as the engine of the economy, it advocates the physical consolidation of Dublin, particularly for much-needed housing and employment, supported by effective land-use and transportation policies, as an essential requirement for a competitive Dublin.

The Regional Planning Guidelines for the Greater Dublin Area 2010–2022 (RPGs) translate the national strategy to regional level, with an emphasis on Dublin as the driver of national development, and the need to physically consolidate the growth of the metropolitan area, with clear direction for greater integration of land-use and transport planning.

Based on the currently available Regional Planning Guidelines 2010–2022, the 2011 Census, and population projections published by the CSO in 2013, this Development Plan works to a projected population increase of almost 60,000 persons by 2022. Assuming an average occupancy rate of two persons per residential unit, the housing requirement is 29,500 units approximately. It is, therefore, planned to provide capacity to exceed this figure in the housing strategy for the Development Plan period 2016–2022, in order to accommodate longer-term sustainable growth.

The population of Dublin city is projected to increase by 75,902 from 530,208 in 2013 to 606,110 in 2022. This 2013 figure is derived from the Central Statistics Office's (CSO) preliminary population estimates for the Dublin Region for April 2013 and the 2022 figure is based on

the population targets contained in the Regional Planning Guidelines for the Greater Dublin Area 2010–2022. By applying a household size of 2.0 persons per unit to the projected population increase of 59,038 between 2015 and 2022, it is possible to estimate that there is a need to construct 29,500 new residential dwelling units to accommodate the population increase.

The zoned land available for residential or a mix of residential and other uses under the development plan equates to 440ha. The units that can be accommodated on the 440 hectares together with the units that can be accommodated on 47 hectares of lands re-zoned with an emphasis on housing under the development plan would exceed 55,000 units. In this context, it is considered that there is sufficient zoned land to provide for the projected population increase over the lifetime of the development plan and over an extended nine-year period as outlined in the then DEHLG 'Development Plans – Guidelines for Planning Authorities' (2007).

The settlement strategy for the metropolitan area includes a strong emphasis on the need to gain maximum benefit from existing assets, such as public transport and social infrastructure. Dublin city in its entirety lies within the metropolitan area and the RPGs give direction to Dublin city as the gateway core for high intensity clusters, brownfield development urban renewal and regeneration. The development plan incorporates this through the settlement hierarchy which priorities the inner city, key district centres and strategic development and regeneration areas (SDRAs).

The Dublin City Development Plan comprises a written statement, maps and various appendices which are identified in **Table 2**.

Table 2: Development Plan Structure

Chapter	Chapter Title
Chapter 01	Strategic Context for the City Development Plan 2016–2022
Chapter 02	Vision and Core Strategy
Chapter 03	Addressing Climate Change
Chapter 04	Shape and Structure of the City
Chapter 05	Quality Housing
Chapter 06	City Economy and Enterprise
Chapter 07	Retailing
Chapter 08	Movement and Transport
Chapter 09	Sustainable Environmental Infrastructure
Chapter 10	Green Infrastructure, Open Space and Recreation
Chapter 11	Culture and Heritage
Chapter 12	Sustainable Communities and Neighbourhoods
Chapter 13	Monitoring, Implementation and Development Management
Chapter 14	Land Use Zoning
Chapter 15	Strategic Development and Regeneration Areas
Chapter 16	Development Standards

Volume	
Volume 1	Written Statement
Volume 2	The appendices are contained in a separate volume which include the Housing Strategy, the Retail Strategy together with a number of other appendices
Volume 3	Zoning Maps
Volume 4	Record of Protected Structures
Volume 5	Strategic Environmental Assessment
Volume 6	Appropriate Assessment
Volume 7	Strategic Flood Risk Assessment

Relationship with Other Plans and Programmes

A review of plans, policies and programmes relevant to the Development Plan was carried out. The review focused primarily on national, European and international plans and programmes. The purpose of this review is to take into consideration the policy framework within which the Dublin City Development Plan 2016–2022 is being developed. Consideration was given to the key statutory and non-statutory plans, programmes and policies relevant to the Development Plan. The findings of the review helped define the objectives for the SEA and informed the assessment of alternatives. Some of the key plans and programmes include:

The National Spatial Strategy 2002–2030;

- The National Development Plan (2007–2013) and Infrastructure and Capital Investment 2012–2016 Medium Term Exchequer Framework;
- National Climate Change Strategy;
- National Climate Change Adaptation Framework (2012);
- National Policy Position on Climate Action and Low-Carbon Development;
- National Renewable Energy Action Plan;
- The National Biodiversity Plan;
- Smarter Travel – A Sustainable Transport Future 2009–2020;
- Greater Dublin Area Transport Strategy 2016–2035
- Water Services Strategic Plan – A Plan for the Future of Water Services (2015);
- National Catchment Flood Risk Assessment and Management Programme;

- Regional Planning Guidelines for the Greater Dublin Area (2010–2022);
- Eastern Midlands Regional Waste Management Plan (2015–2021); and
- Eastern River Basin Management Plans.

The Baseline Environment

Ireland's natural environment, although under increasing pressure, generally remains of good quality and represents one of the country's most essential national assets, however pressures have increased significantly (EPA 2008 and 2012). As Ireland's economy grew, these pressures accelerated at a rate which exceeded that observed in other EU countries. In their fifth and most recent state of the environment review, the EPA identified four priority challenges for the environment, which, if addressed successfully, should benefit the present and future quality of Ireland's environment. These comprise: Valuing and Protecting our Natural Environment; Building a Resource-Efficient, Low Carbon Economy; Implementing Environmental Legislation; and Putting the Environment at the Centre of Our Decision Making. All of these are relevant to the Plan. The existing environmental pressures in Dublin city are set out in **Table 3**.

Table 3: Existing Environmental Pressures in Dublin City

Issue Area	Existing Environmental Pressures
Population and Human Health	<p>Given the limited space available in Dublin city, the main issues are to accommodate future growth while consolidating development and creating a compact city. There is also a need for high quality public transport and water/wastewater treatment provision. The challenges facing Dublin city include:</p> <ul style="list-style-type: none"> • Demand for more housing units and finite stock of zoned and serviced lands; • High vacancy rate in the city; • Requirement for adequate water and wastewater infrastructure to serve areas of future development and/or areas of increased density; • Traffic-related air emissions impacts; additional quality open space provision required to support the increasing density of population; • Continued expansion and interconnection of green and recreational spaces as part of the green infrastructure of the city; • Noise in the city, if excessive, can be detrimental to the physical and mental health of the population; and • The supply, storage and treatment of water now lie within the remit of Irish Water as the national water utility.
Biodiversity, Flora and Fauna	<p>As the population of the city increases, increasing demands are made on the existing green spaces, coastline, and associated habitats and waters. It is important that the coastal zone, together with its associated ecological network, is managed and developed in a way that protects and enhances its natural heritage and landscape. There are a number of European (Natura 2000) sites located adjacent to the city that could be impacted by the Development Plan and need to be taken into account. The Dublin City Council area is traversed by a number of key regional river systems and degradation in water quality and ecological status from upstream pollution to rivers is a significant problem for the city. The city also has a variety of open and green spaces which together form the green infrastructure of the city. Insensitive development can cause a loss of connectivity of these habitats for wildlife which interrupts or is too close to existing green corridors.</p> <p>Lack of protection and mitigation on construction sites leading to localised pollution of watercourses and impacts of existing flora and fauna through the generation of noise and dust and alterations to habitats. Replacement of native species of flora and fauna by non-natives due to improper land management practices and the spread of invasive alien species (particularly in river valleys) is also a pressure.</p> <p>The existing wastewater treatment plant at Ringsend is operating over its design capacity and has no additional capacity to facilitate the anticipated increase in population in the city. This will potentially lead to deterioration in surface water quality, however the delivery of the Greater Dublin Strategic Drainage Supply project would free up some capacity at Ringsend.</p> <p>Potential increased flood risk from changed land-use patterns, climate change and predicted sea rise level could result in loss or alteration of habitats through erosion and alteration of levels. An increase in the frequency of high rainfall events due to climate change can result in sudden elevated levels of pollutants contaminating aquatic habitats. Existing faulty connections and combined sewer overflows resulting in contamination of surface waters with effluent and degradation of aquatic habitats. Pressures can also arise on coastal areas due to increased commercial, industrial and recreational activities, including more activity in Dublin Bay.</p>

Table 3 (ctd): Existing Environmental Pressures in Dublin City

Issue Area	Existing Environmental Pressures
<p>Air Quality and Noise</p>	<p>Air quality in Dublin city is currently good. In particular years Dublin’s air quality has shown significant improvement in the levels of black smoke, lead, sulphur dioxide, benzene and carbon monoxide (CO). Emissions from the transport sector are the main, but not the only threat to air quality in the Dublin region. Other issues include the construction industry, uncontrolled burning of waste and localised emissions from a small number of industries.</p> <p>Noise mapping undertaken as part of the Dublin Agglomeration Noise Action Plan indicated that traffic congestion and movement were the issues of concern regarding noise pollution. Of the 527,612 people living in the Dublin City Council area, 47% of the population are exposed to sound levels from traffic sources above the desirable day time level of 55 dB (A) with 5% exposed to day time sound levels above 70 dB (A). Railway, industrial, and aircraft noise does not have a major impact on overall noise levels. The majority of noise complaints in 2013 related to the general commercial activities of the city followed by commercial music complaints and complaints related to construction.</p>
<p>Climate</p>	<p>The two single greatest issues facing the city in relation to climate change relate to increased amounts of greenhouse gas (GHG) emissions from transport movements, and the danger posed by flooding events which will, in part, occur as a result of the former. Solutions require reductions in unsustainable transport movements, and the amelioration of potential flooding events. Changes in sea level and/or changes in the occurrence of severe rainfall events as a result of climate change could adversely impact upon the city’s human beings, its biodiversity and its economy.</p> <p>Codema as Dublin city’s energy authority, and in association with Dublin City Council, produced a Sustainable Energy Action Plan (SEAP) for the period 2010–2020 and monitors sustainability indicators to track progress. The aim of the plan is to reduce the city’s energy consumption by 33% and associated emissions by 20% by 2020. Codema’s Monitoring and Progress Report on the SEAP noted that Dublin city is on track to meeting the 33% energy reduction target, according to the Sustainable Energy Authority of Ireland’s benchmarking system. Waste and agriculture are not major sources of GHG emissions within the city boundary. In 2011 Dublin city (11.5% of the national population) released approximately 2.95 million tonnes of CO₂. On average, a Dubliner released 5.6 tonnes of CO₂ per year, less than the national average of 12.6 tonnes in 2011 (CSO Environmental Indicators, 2014). Overall, CO₂ emissions dropped significantly by 43% over the period 2006–2011, mainly due to changes in fuel usage and decreases in emissions from the electricity grid. This puts Dublin more in line with other peer cities such as London (4.9t CO₂ per capita). Dublin city in 2011 consumed 10.14 TWh of primary energy per year (compared to 22.0 TWh in 2006), in the form of electricity, oil, natural gas and renewable energy.</p> <p>In terms of more recent calculations of energy consumption, as part of Dublin City’s Sustainability Report for 2013, Codema estimated the city’s energy usage (in terms of megawatts/hour/capita) decreased approximately 18% in the period 2006–2011. Dublin city encourages generation and use of sustainable energy, and the council works continuously with Codema on projects that aim to reduce energy use.</p>

Table 3 (ctd): Existing Environmental Pressures in Dublin City

Issue Area	Existing Environmental Pressures
Landscape	<p>The landscape in Dublin city is characterised by its predominantly urban fabric, its diverse styles of building of varying heights and its green infrastructure – the network of open spaces and parks that contribute to the natural heritage aspect of landscape in an urban environment. Creating landscape linkages within an urban fabric that has reached almost full development can be difficult, and a key challenge lies in providing accessible public landscape that meets the perception and demands of a European capital city. A balance must be struck between competing demands or incompatible uses within the public landscape, such as between biodiversity and recreational uses. Changes in the private landscape can occur through development and densification, from small-scale removal of front residential gardens for parking to larger scale changes in the landscape associated with institutional facilities when redeveloped. A key issue is to ensure that open space amenities, including the natural environment, are connected as main features of the city’s character.</p>
Soils and Geology	<p>The soils in Dublin city are ‘urban’ in nature i.e. soils which have been disturbed, moved and manipulated by human activities. Urban soils are generally overlain by a non-agricultural, man-made layer formed from mixing, infilling or contamination by industrial uses. There are existing contaminated grounds due to historical and industrial activities at some sites (e.g. vitriol plants, glass manufacture, iron works, fertiliser plants etc.). Contaminated soils may also place technical or financial pressures on development and contaminants bound to organic matter in soils can be released due to disturbance, dredging and removal of the soil. Other pressures to soils include structural degradation, compaction, erosion (e.g. from recreational activities), invasive alien species, and reduced groundwater recharge/holding capacity by increased soil impermeability from development. The potential increased flood risk from changed land use patterns, climate change and predicted sea rise level could result in loss of soil organic matter through erosion and alteration of levels; additionally increased volumes of surface water run-off due to conversion of permeable landscapes to impermeable can cause increased flooding, erosion and alteration of soils and their associated habitat. The lack of a Soil Framework Directive means there is no legislative or policy enforcement for the protection of soils.</p>
Water	<p>Some surface waters are at significant risk of failing to achieve the WFD objective of ‘good’ status in 2015. Of the transitional waterbodies present in Dublin city, the Lower Liffey Estuary is currently at ‘good’ water status while the Tolka and North Bull Island Estuaries are at ‘moderate’ status. The Dublin Bay coastal waterbody is at ‘good’ status, and both groundwater bodies in Dublin city are currently at ‘good’ waterbody status. All river waterbodies however are currently at ‘moderate’ to ‘poor’ status. It should be noted that the quality of river waters flowing into the Dublin City Council area are to a large extent determined by activities in the upstream catchments in adjoining local authorities. However, the management of water quality on a single national river basin district under the Water Framework Directive should lead to a more integrated approach to the management of the all river catchments. The main pressures to rivers in Dublin city are upstream pollution, combined sewer overflows, misconnections of wastewater from individual houses and urban runoff.</p> <p>Flooding is a natural process that can happen at any time in a wide variety of locations and plays a role in shaping the natural environment. Dublin city is most vulnerable to two key sources of flooding – fluvial and coastal. The challenge for Dublin city is to reduce the flood risk in the city to the National Flood Standards to above 1% annual exceedance probability (AEP) (or roughly 100 year flood event) for fluvial flooding and above 0.5% AEP (roughly 200 year flood event) for tidal flooding, as far as is reasonably possible.</p>

Table 3 (ctd): Existing Environmental Pressures in Dublin City

Issue Area	Existing Environmental Pressures
<p>Material Assets</p>	<p>It is considered that the completion of the Greater Dublin Strategic Drainage Study will resolve the majority of issues regarding wastewater treatment constraints up to 2031. This will allow for wastewater treatment capable of serving sustainable and in some instances, appropriate higher density development of the city and surrounding areas, without any negative impact on the achievement of the objectives of the Water Framework Directive. Long-term drinking water supplies for Dublin should be resolved through the Water Supply Project. This project aims to supply water to the Greater Dublin Area up to 2031 and beyond.</p> <p>The main issues in relation to transport includes accommodating the needs of public transport, pedestrians, cyclists and the private vehicles given the city’s limited road space, and traffic congestion is also an issue. As such it is imperative that there is a modal shift to more sustainable travel patterns i.e. the need to motivate greater numbers of people to cycle, walk or use public transport, including regional initiatives.</p> <p>A range of issues has been identified for waste management in Dublin city. These include localised as well as more strategic issues: contribute to meeting the strategic Eastern-Midlands Regional Waste Plan targets; reuse of materials rather than the use of new materials in development; a proportion of building materials should be from recycled materials such as concrete, brick or stone; use of renewable materials and those low embodied energy materials and low toxic materials; biowaste is a valuable resource and its recycling should continue to be encouraged; continued encouragement of reuse, up-cycling and recycling and a move away from landfill in order to meet the targets of the Landfill Directive.</p> <p>Strategic waste issues related to the entire Eastern-Midlands Region as well as Dublin city include: the assessment of historic and unregulated legacy landfill/ illegal dump sites; lack of a third or fourth bin in some areas which would allow for better segregation of waste; illegal waste storage and non-compliant businesses; inconsistencies in the classification and thus inappropriate disposal of construction and demolition waste as mixed or municipal waste, given the significant potential for recycling this material; current over-reliance on the export of residual waste streams abroad for processing and recovery.</p> <p>The Dublin Waste to Energy plant will help towards reducing waste going to landfill as well as facilitating indigenous recovery of waste in Ireland.</p>
<p>Cultural Heritage (archaeological and architectural heritage)</p>	<p>Development which involves material alterations or additions to protected structures can detract from the special character of the structure and its settings, and have the potential to result in the loss of features of architectural or historical interest. The main issues in relation to cultural heritage are excessive parking in the front gardens of protected structures and the loss of urban fabric due to insensitive development.</p>

Environmental Sensitivity Mapping

Environmental sensitivity mapping is a useful tool for identifying at a strategic level (in this case at the extent of a capital city) environmentally sensitive areas. Such sensitivity mapping can be seen as being based on the principles of SEA by presenting a visual overview of the relative sensitivity of areas, particularly where they overlap, in order to provide a more strategic and informed approach to planning and the selection of alternatives; sensitive environmental receptors have less capacity to absorb changes to their conditions. An Environmental Sensitivity Map (ESM) has thus been compiled for the Dublin city county administrative area.

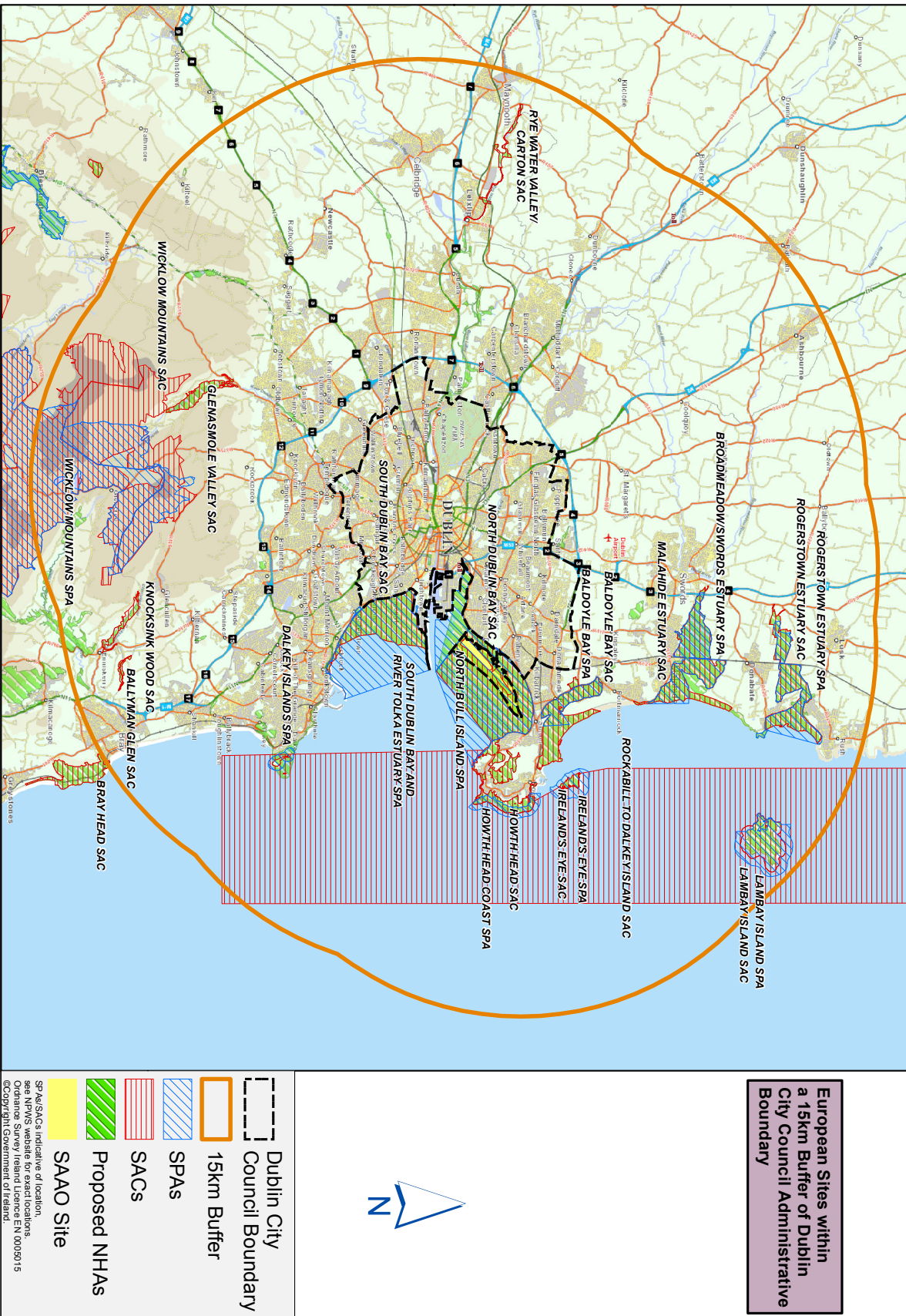
The environmental factors that have been considered in compiling the ESM for Dublin city are summarised below and cover a range of categories from biodiversity and water to landscape and cultural heritage:

- European ecological designations including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs);
- National ecological designations such as proposed Natural Heritage Areas (pNHAs);
- Dublin City Parks Biodiversity Survey and habitat mapping;
- Tree preservation orders (TPOs);
- Rivers and canals;
- Flood zone ('A' and 'B') extents;
- Water quality and groundwater vulnerability;
- WFD Register of Protected Areas;
- Special Amenity areas and parks/open spaces;
- Record of Monuments and Places (RMP);
- Architectural Conservation Areas (ACAs); and
- Geological Heritage Areas (GHAs) and County Geological Sites (CGCs).

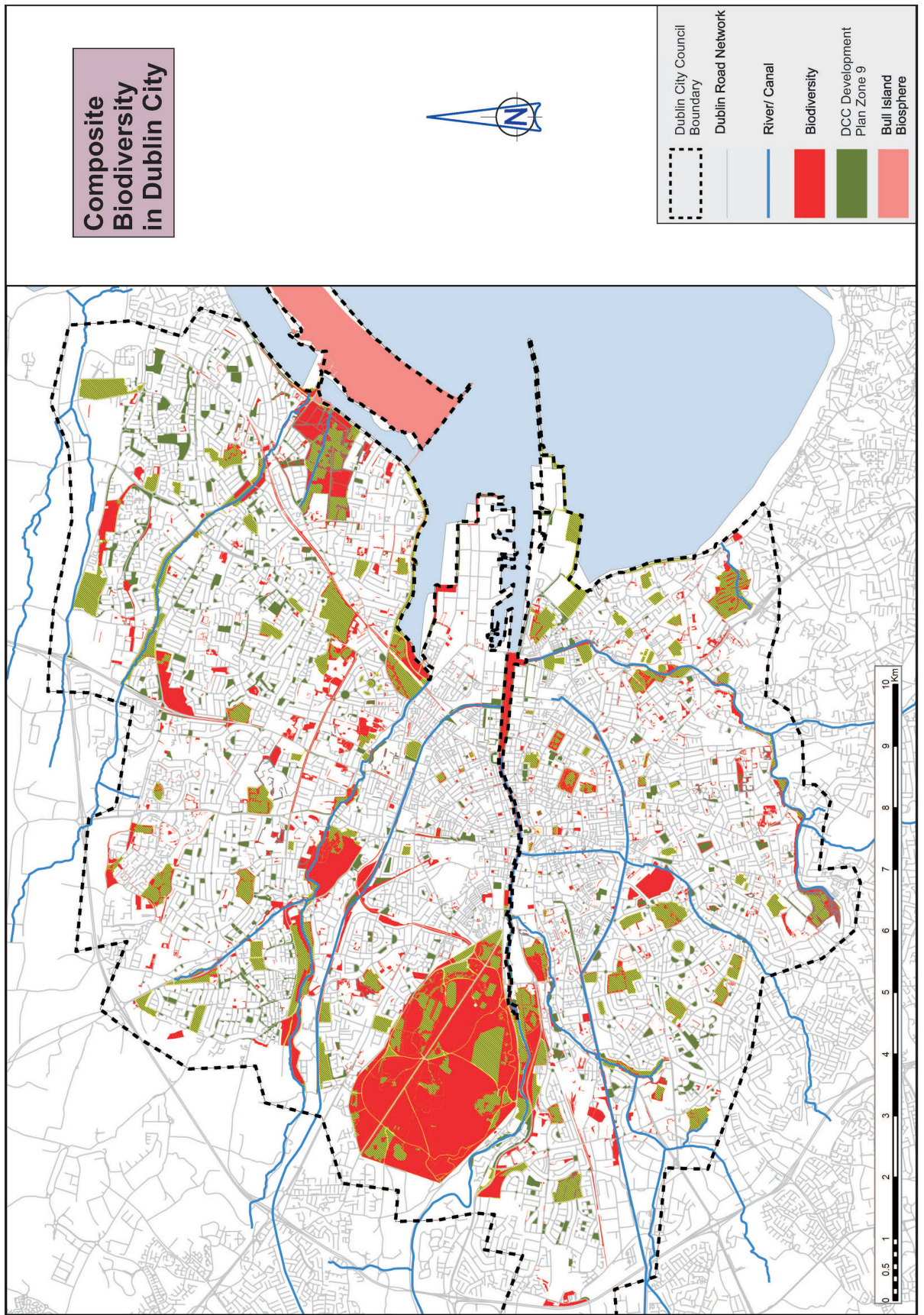
A number of these sensitivities were mapped (see Maps 1–9).

The environmental factors above were assigned to a weighting category of High, Medium or Low. The weighted data was brought in to a geographic information system (GIS) to allow spatial overlay and calculation of the overall sensitivity. The colour scheme gives an indication of the relative sensitivity of the environment with darker red indicating high sensitivity and greys representing areas better able to absorb change. While it is acknowledged that there are limitations and an element of subjectivity to ESM, where there is a concentration of sensitive areas or overlap it becomes readily apparent where increased development in such areas could cause deterioration of the environment without appropriate mitigation measures being taken (see Map 10).

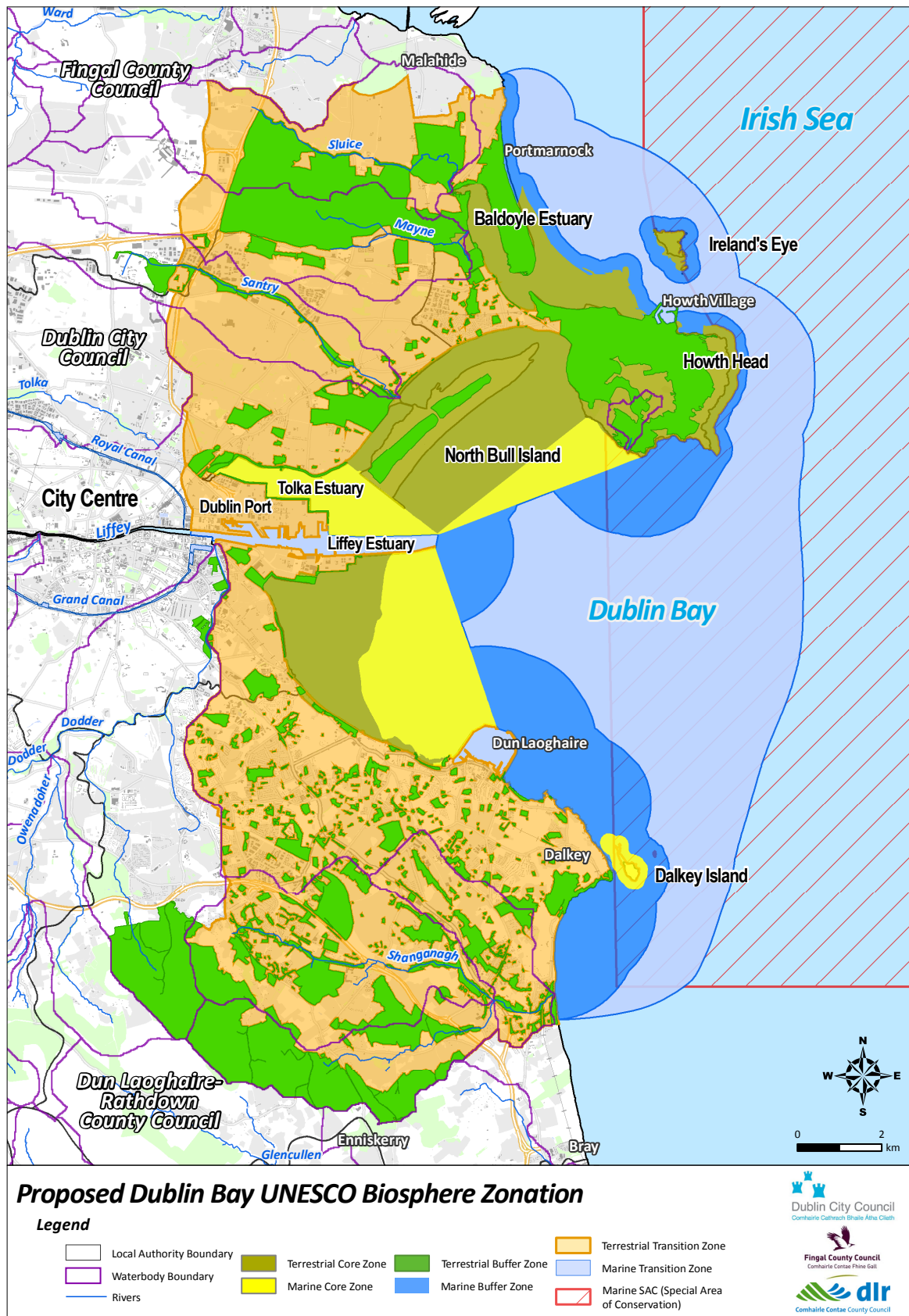
Map 1: European Sites within a 15 km Buffer of Dublin City Council Administrative Area



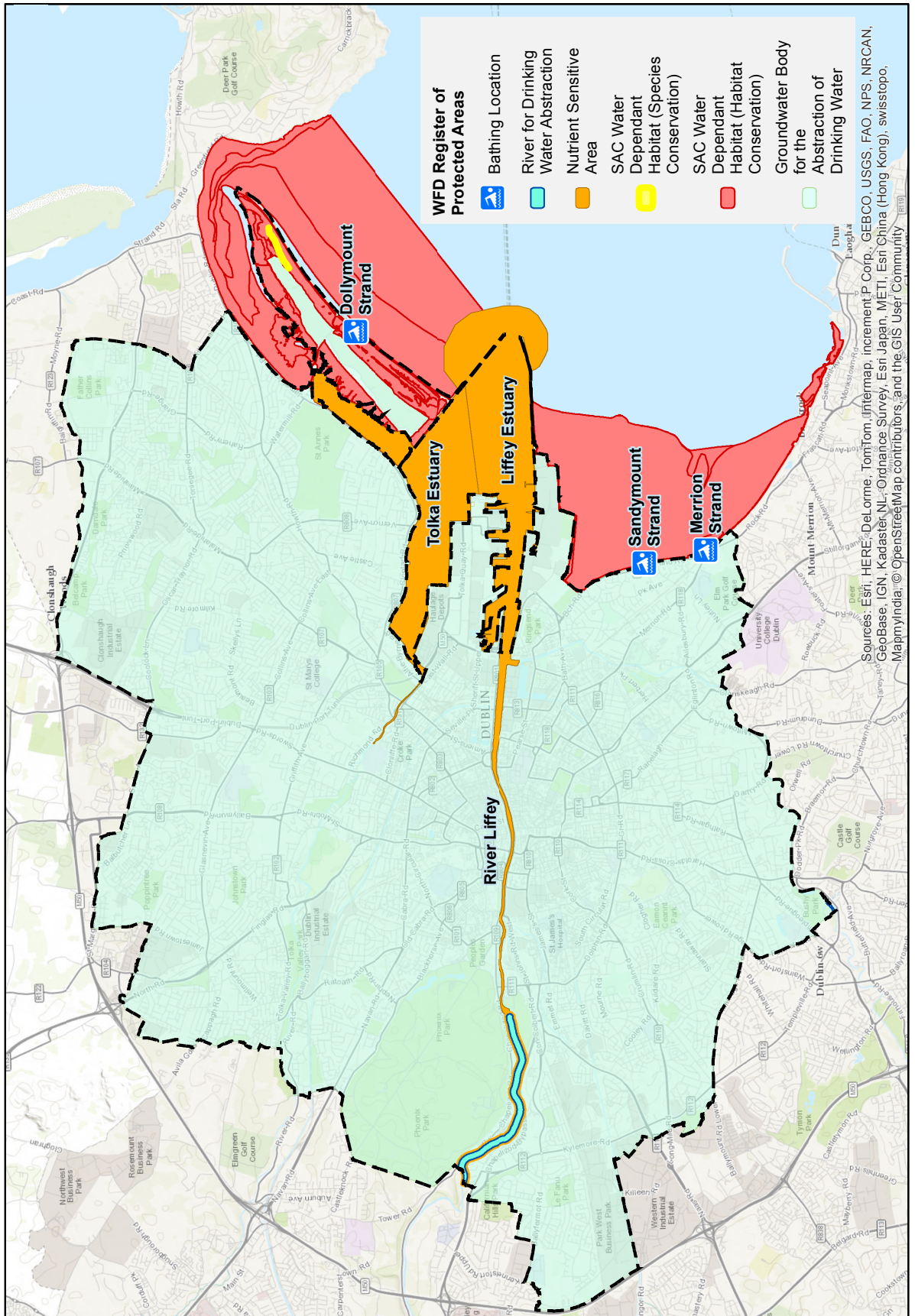
Map 2: Composite Biodiversity Map



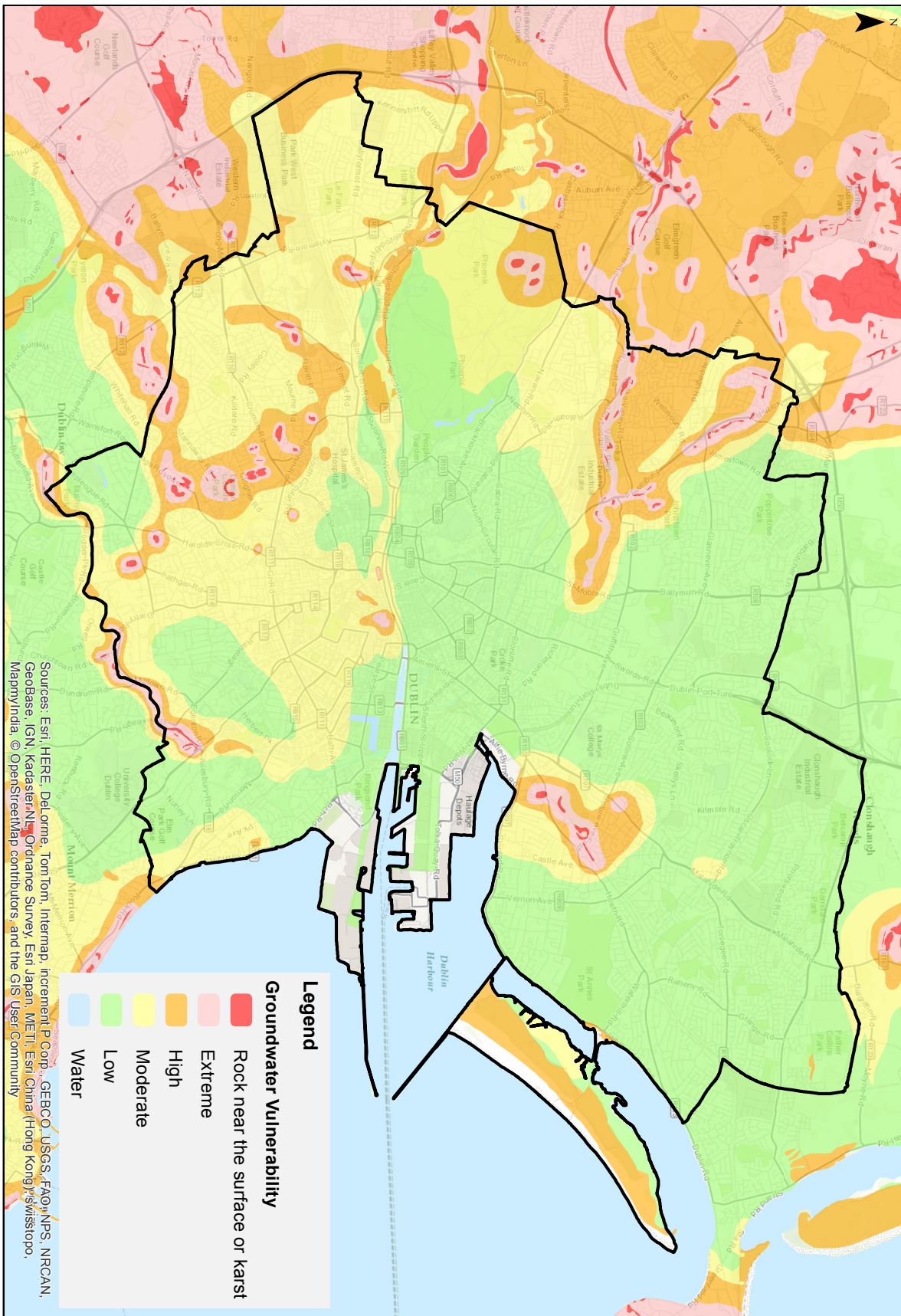
Map 3: Proposed Dublin Bay UNESCO Biosphere Zonation



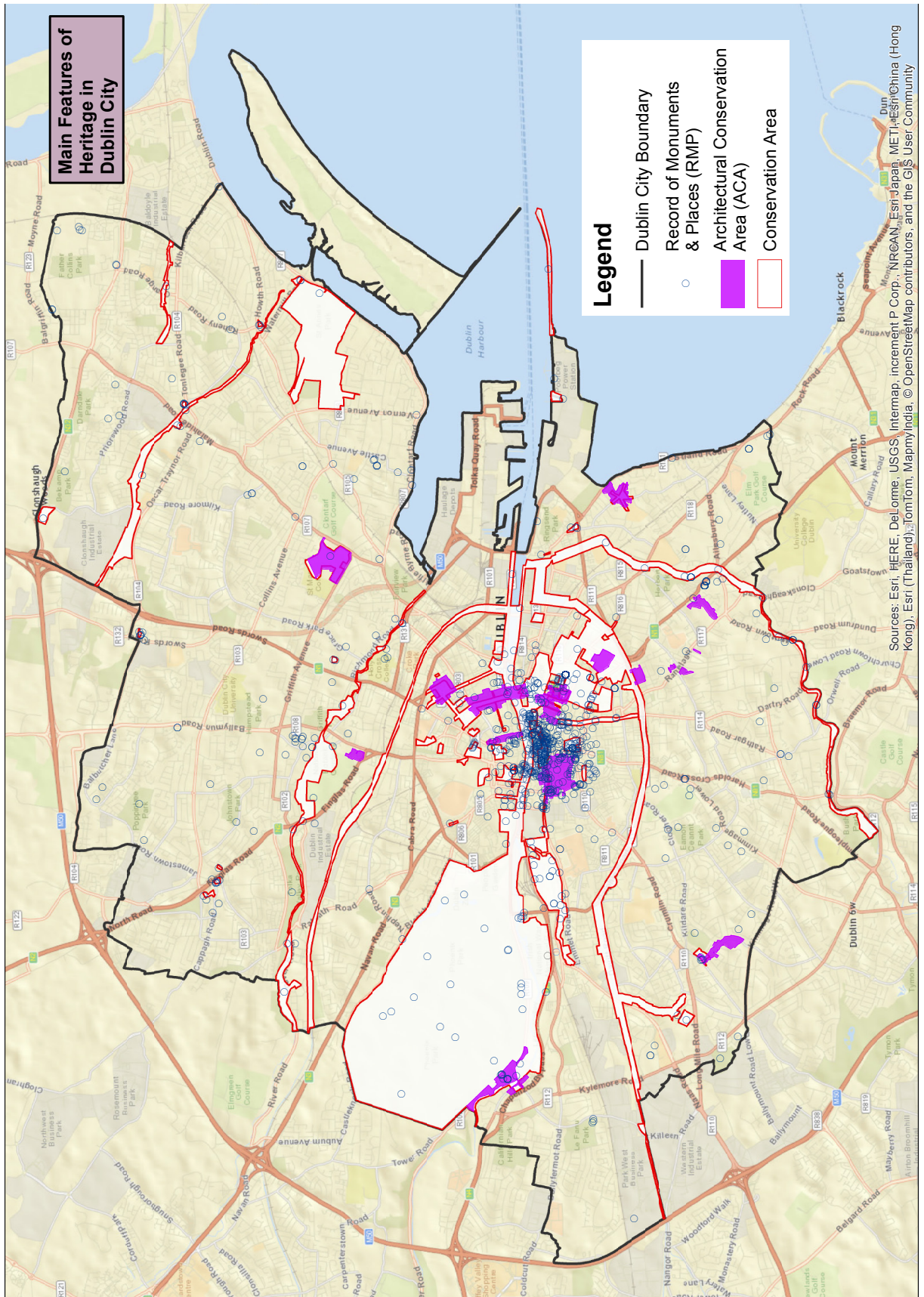
Map 4: WFD Register of Protected Areas



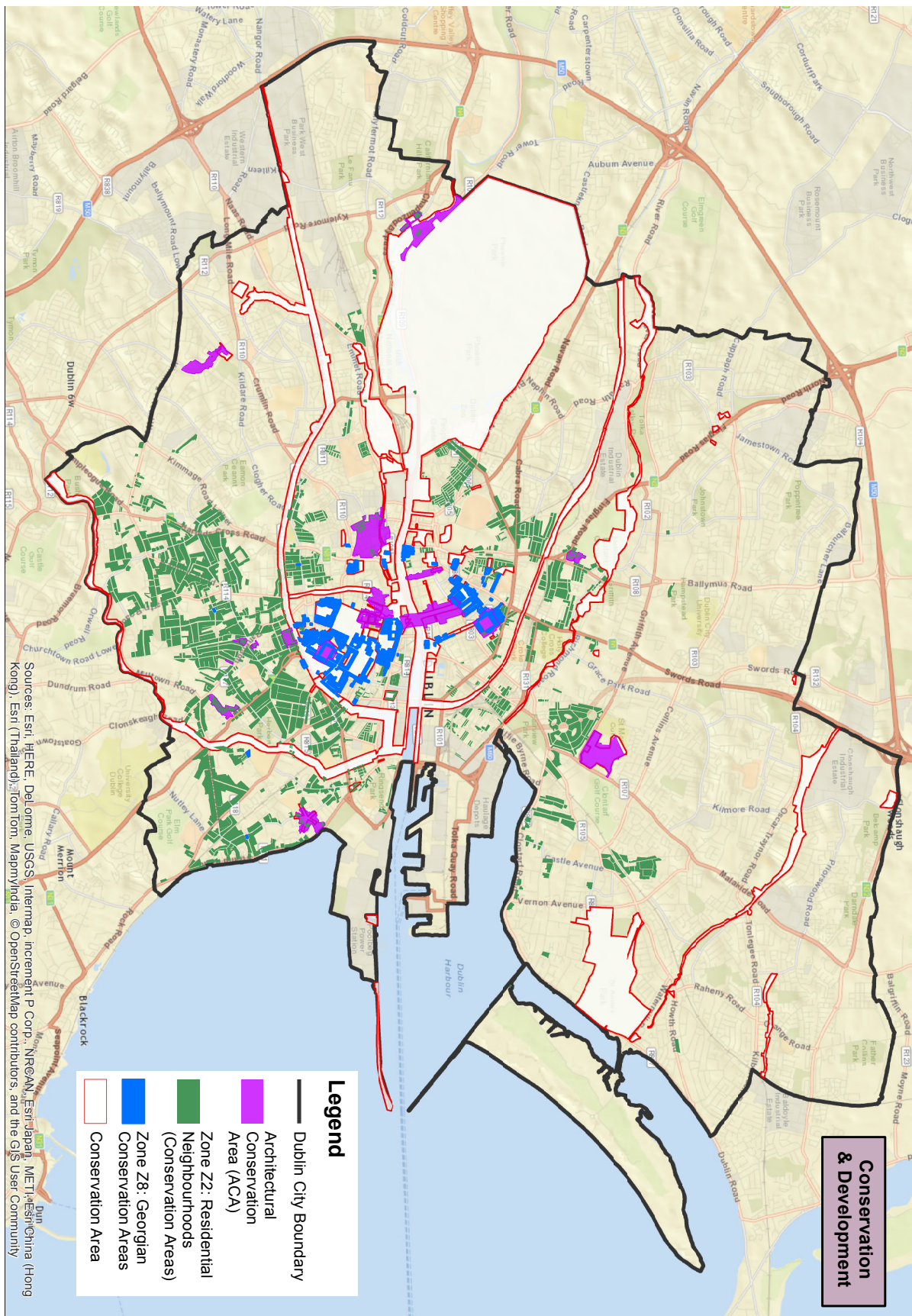
Map 5: Groundwater Vulnerability



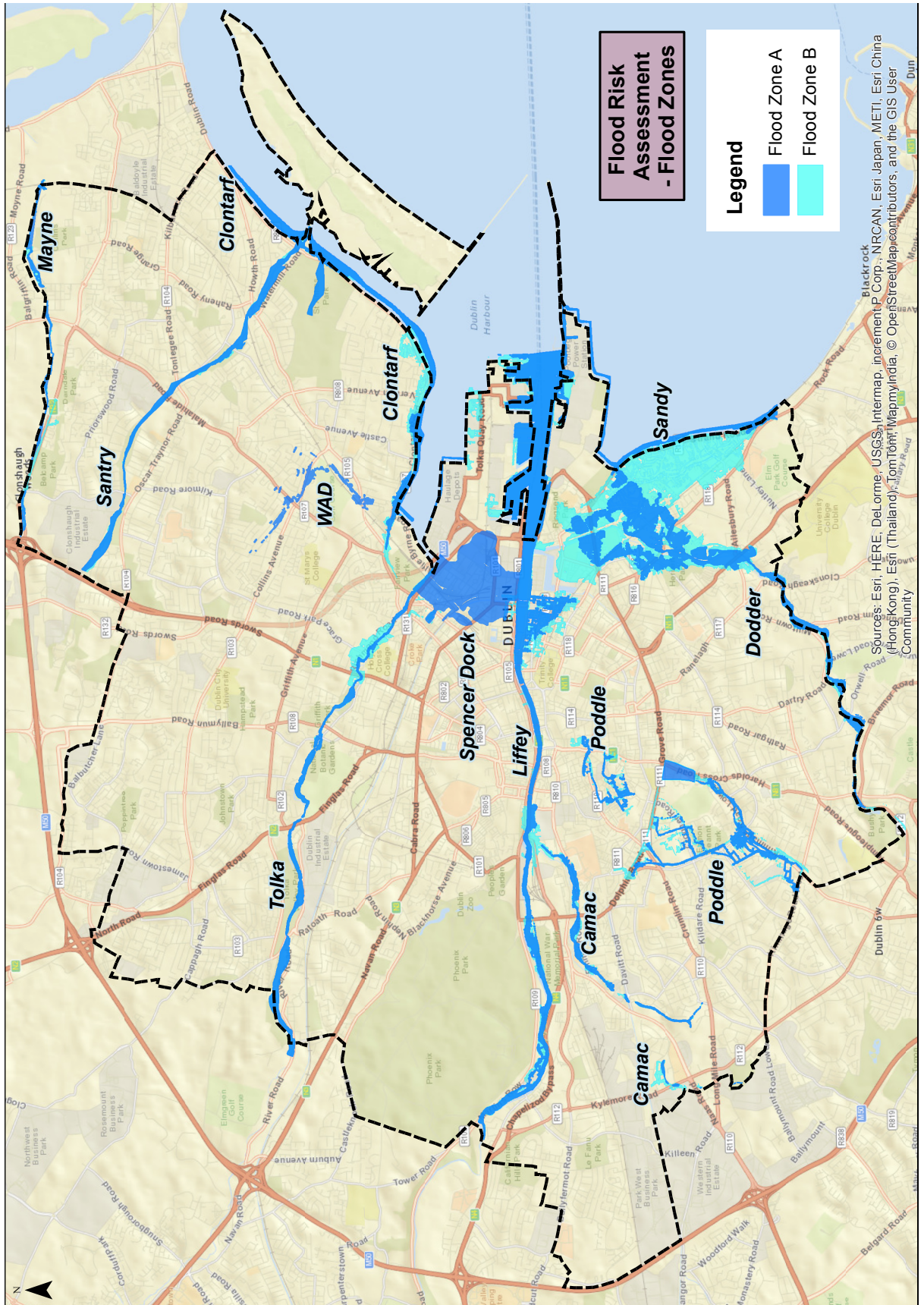
Map 6: Cultural Heritage including Archaeology and Architectural Heritage



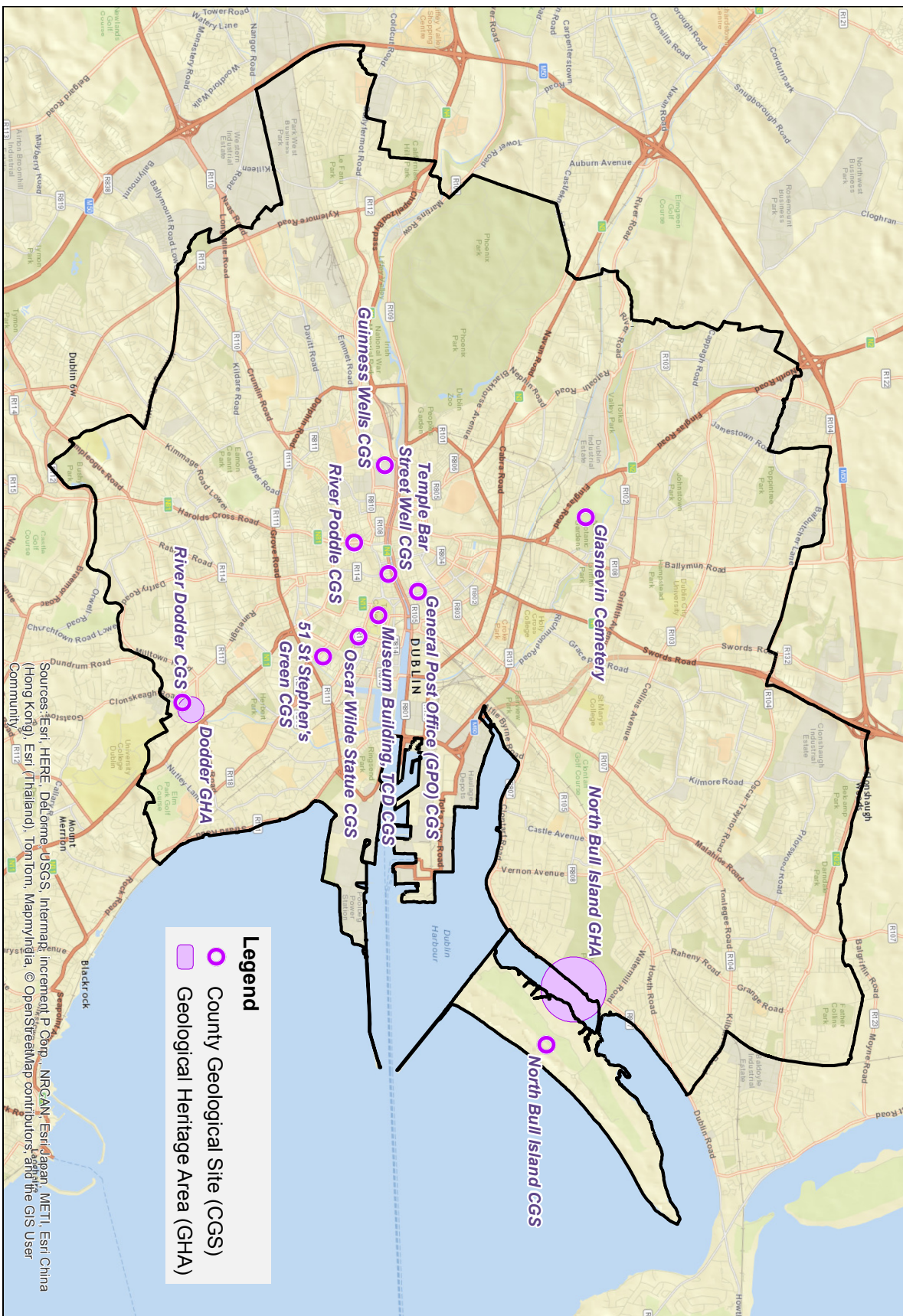
Map 7: Conservation and Development



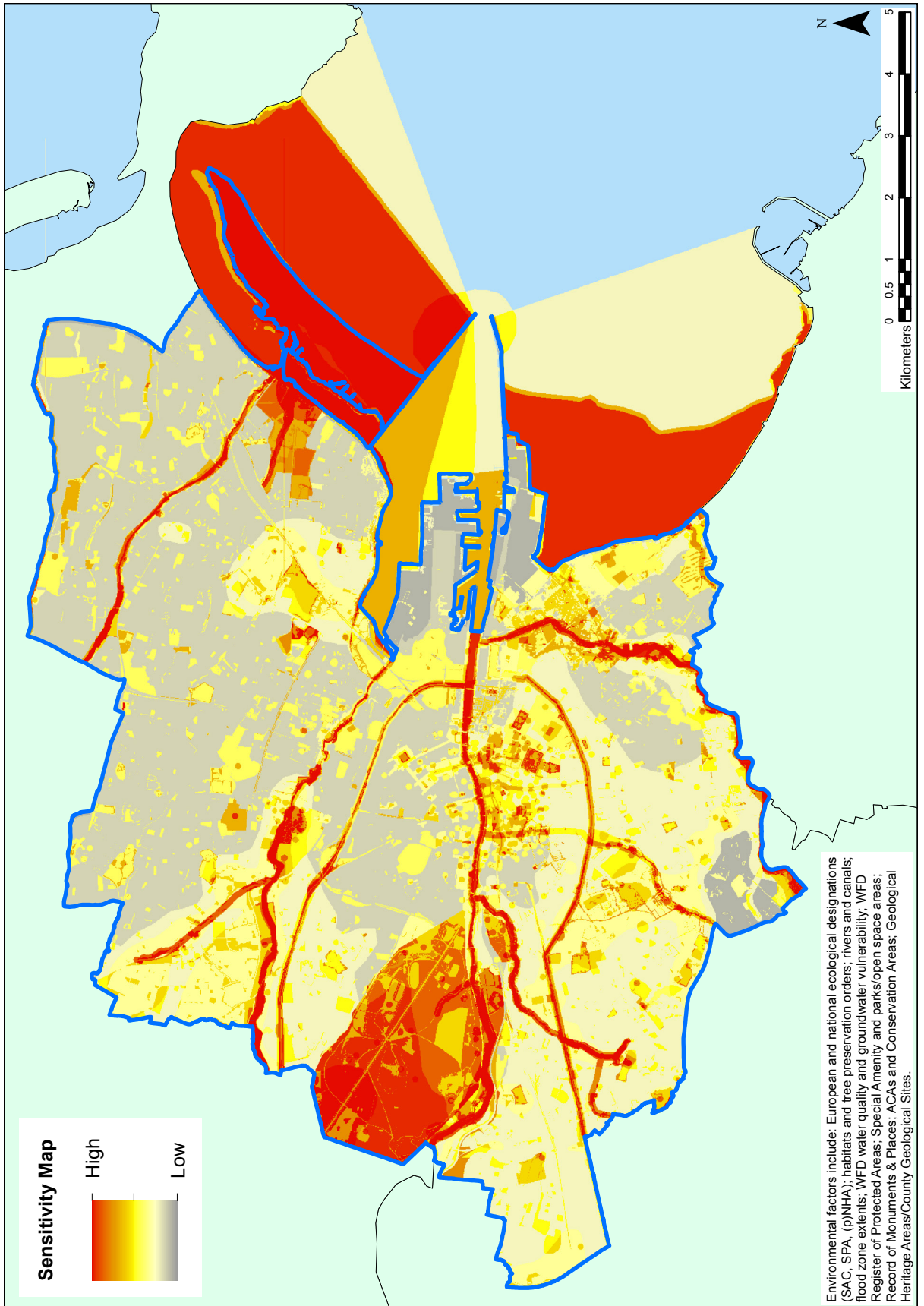
Map 8: Flood Zones



Map 9: Location of Geological Heritage in Dublin City



Map 10: Sensitivity Map



In accordance with the SEA Directive, the interrelationship between the SEA environmental topics must be taken into account. The key interrelationships identified in this SEA are set out in. Of particular note is the primary relationship between water quality and biodiversity, flora and fauna and human health. Flora and fauna, rely directly on the aquatic environment as a habitat. The quality of this habitat has a direct relationship to the quality of foodstuffs (e.g. fish and shellfish) and its impact on human health.

Another key relationship is between water and climate. Global greenhouse gas emissions associated with transport, industry and other sources have the potential to negatively impact on climate change. This in turn can result in more frequent and more intense flooding and drought conditions affecting material assets, such as private residences and infrastructure, and biodiversity through changes in water quality and the hydrologic regime.

Table 4: Key Interrelationships Identified between Environmental Receptors

Environmental Receptor	PHH	BFF	W	AQ	CF	MA	CH	L
Population and Human Health (PHH)		X	X	X	X	X	X	X
Biodiversity, Flora and Fauna (BFF)	X		X	X	X	X	/	X
Water (W)	X	X		/	X	X	/	X
Air (AQ)	X	X	/		X	X	/	/
Climatic Factors (CF)	X	X	X	X		X	/	X
Material Assets (MA)	X	X	X	X	X		X	X
Cultural Heritage (CH)	X	/	/	/	/	X		X
Landscape and Soil (L)	X	X	X	/	X	X	X	

X Significant Interrelationship / Insignificant Interrelationship

Environmental Protection Objectives, Targets and Indicators

There are essentially three types of objectives considered as part of this SEA. The first relates to the objectives of the Dublin City Development Plan, the second relates to wider Environmental objectives i.e. environmental protection objectives at a national, European and international level, and finally there are the Environmental Protection Objectives, which were devised to test the effects of the Development Plan on the wider environment.

The Environmental Protection Objectives reflect the existing environmental issues relevant to implementation of the Development Plan. They are focused on protecting and enhancing the natural and human environment and on minimising negative effects. The selected objectives for this SEA are listed in **Table 5**.

Table 5: Environmental Protection Objectives

Environmental Receptor	Environmental Protection Objectives
Population and Human Health (PHH1)	To create a sustainable compact city and a high quality safe environment in which to live, work and/ or visit.
Biodiversity / Flora and Fauna (BFF1)	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features.
Climatic Factors (CF1)	Contribute to the mitigation of/ and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.
Air Quality (AQ1)	Minimise emission of pollutants to air associated with development activities and maintain acoustic quality.
Water (W1)	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation including the River Basin Management Plan of the Eastern River Basin District.
Material Assets (MA1)	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population
Cultural Heritage (CH1)	To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage
Landscape and Soils (L1)	To protect and where appropriate enhance the character, diversity and special qualities of Dublin city's landscapes and soils

In addition to the Environmental Protection Objectives, associated targets and indicators were developed. The overall purpose of the indicators in the SEA process is to provide a way of measuring the environmental effect of implementing the Development Plan once it is adopted. Indicators are also used to track the progress in achieving the aspirational targets set in the SEA as well as the Development Plan. The proposed indicators were selected bearing in mind the availability of data and the feasibility of making direct links between any changes in the environment and the implementation of the Development Plan.

Targets were considered over the duration of the scoping phase, baseline data collection and assessment in order to ensure relevance to the Environmental Protection Objectives as well as the objectives of the Development Plan. In each case, any target that is set must

be attributable to the implementation of the Development Plan. The targets and indicators associated with each SEA objective are outlined in **Table 7**.

Identification of Development Plan Alternatives

Article 5 of the SEA directive requires the environmental report to consider *'reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme'* and the significant effects of the alternatives selected. Alternatives must be realistic and capable of implementation and should present a range of different approaches within the statutory and operational requirements of the Development Plan. It is noted that a 'Do nothing' option has not been explored, as this is not considered reasonable, given the legislative requirement to update the Development Plan.

The strategic alternatives below were considered for assessment as part of the SEA process for the Dublin City Development Plan 2016–2022, they include:

Alternative 1 – Targeted Growth around existing identified growth centres

This alternative seeks to target and consolidate growth around the Z5 city centre mixed use zoning area as well as existing identified growth centres such as the Strategic Development and Regeneration Areas (SDRAs), the Strategic Development Zones (SDZs) and areas identified in Local Area Plans (LAPs). The Council would favour the development of vacant lands within the canal area of the city and to incentivise owners to redevelop these lands (such as through the ‘*New City Living Initiative*’).

This alternative examines changing the wording of Z10 (Inner Suburban Sustainable Mixed-Use) land use areas to allow for residential as the prominent use outside the canals and more mixed use within the canals.

The Z10 zoning will read as follows: ‘To consolidate and facilitate the development of inner city and inner suburban sites for mixed-uses, - with residential the predominant use in inner suburban locations and office, retail and residential the predominant uses in inner city areas.’

Alternative 2 – Market Led Growth

The approach of ‘Alternative 2’ is to promote the development of the city in a market-led manner, which would involve a dispersed model of spatial perspective throughout the city. The location, nature and density of new development in the city would be influenced primarily by market

demand and driven by economic market forces. Higher intensity development would not necessarily take place within designated growth centres (SDRAs/KDCs) in close proximity to transportation nodes.

Sites of high-density development have the potential to be dispersed throughout the city irrespective of the prevailing architectural and residential character or environmental amenity of the surrounding area.

Alternative 3 – Selected Concentration of growth targeted on existing Strategic Development and Regeneration Areas (SDRAs)/ Key Development Centres (KDCs) / Strategic Development Zones (SDZ): elements of a phased approach to the development of land

The third main alternative being considered by the Council is to allow for a selected concentration of growth targeted on existing areas within the SFRAs/KDCs/SDZ areas with a phased approach to delivery of development, such as between the Docklands SDZ and other areas outside the canal area.

Evaluation of Development Plan Alternatives

The previous section outlined that Article 5 of the SEA Directive requires the Environmental Report to describe and evaluate ‘the likely significant effects on the environment of implementing the plan or programmes, and reasonable alternatives’. Therefore such an assessment of the three alternatives identified was undertaken. The assessment analysed each of the alternatives against the Environmental Protection Objectives and a summary of the assessment is provided in **Table 6**.

Table 6: Environmental Assessment of Alternatives

Environmental Protection Objectives (EPOs)	Alternative 1 – Targets Growth around existing identified growth centres		Alternative 2 – Market-led Growth		Alternative 3 – Selected Concentration of growth targeted on existing SFRAs/ KDC/SDZ areas – elements of a phased approach to the development of land	
PH1	++		-		+	-
BFF1	+	-	-		+	-
CF1	+	0	+	-	+	0
AQ1	+		?	-	+	-
W1	+	-	-		+	-
MA1	+		-		+	-
CH1	+	-	-	?	-	?
L1	+	0	-		+	0

Very Positive	Positive	Insignificant/ No impact	Negative	Very Negative	Uncertain
++	+	0	-	--	?

The consideration of reasonable alternatives must take into account ‘the geographical scope of the plan’. The Dublin City Development Plan area represents the core of the city region of Dublin. As the city’s land area is relatively compact, the availability or access to essential infrastructure within competing geographical districts or neighbourhoods is not a major concern. The key issue for the city is not a simple question of whether to locate development at particular locations, but how to facilitate targeted growth within the city by: increasing efficiencies within the limited land resources; by better integrating land-use and transportation; and redeveloping under-utilised brownfield lands (including vacant land, particularly within the canal areas) etc., while having regard to the core issues of climate change and proper planning and sustainable development.

Alternative 1 contributes to sustainable development and as such will result in positive impacts against the Environmental Protection Objectives. Alternative 2 has more negative impacts on the environment than both Alternative 1 and Alternative 3. Alternative 3 has some positive impacts as it is similar to Alternative 1, with the exception that it does not have a focus on consolidation of the city centre. Therefore, the preferred SEA Alternative for the purposes of the Development Plan is Alternative 1.

Evaluation of the Development Plan Policies and Objectives

The purpose of this section of the Environmental Report is to evaluate as far as possible the environmental effects of the Development Plan policies and objectives and to set out measures envisaged to prevent, reduce and as far as possible offset, any significant adverse effects on the environment. The policies and objectives of the Development Plan have been assessed against the

SEA Environmental Protection Objectives for Population and Human Health (PPH1), Biodiversity Flora and Fauna (BFF1), Climatic Factors (CF1), Air Quality (AQ1), Water (W1), Material Assets (MA1), Cultural Heritage (CH1) and Landscape and Soils (L1), as set out in **Section 5**.

The approach used for assessing the policies/ objectives for the Development Plan was a baseline and objectives led assessment using assessment matrices in line with current best practice for SEA of land use plans in Ireland. Detailed matrices have been provided as an appendix to the Environmental Report, while a summary of the significant environmental impacts are provided in the main body of the report.

As part of the assessment, an initial review of policies and objectives was carried out. Suggestions on the language and content were made and included where possible in the development of the policies and objectives as they were modified and developed.

For the most part the policies and objectives contained within the Development Plan would result in positive direct and indirect impacts in all areas. The policies of the Development Plan have been found to have overall significant beneficial impacts on population and human health. Implementing this Development Plan will offer people the opportunity of living in a more sustainable urban compact city, with the potential for a good quality of life. However, this is dependent on the delivery of significant infrastructure including upgrade to the wastewater treatment plant, and also the supply of adequate water supply to meet the needs of the growing population.

The Core Strategy of the Development Plan is based on the development of a compact city that makes efficient use of land located in close proximity to good public transport

links, both existing and those planned for in the near future, thus minimising urban sprawl. This emphasis on reducing the need to travel by private car whilst encouraging modal shift to more sustainable forms of transport is positive for many environmental protection objectives such as climate, air quality and noise.

The Plan also contains a new chapter 'Addressing Climate Change' which seeks to prioritise measures to address climate changes, and also to promote energy efficiency, energy conservation and increased use of renewable energy. In addition, a Strategic Flood Risk Assessment has been carried out for the Plan, which sets out the flood risk management strategy for the city. The Plan also contains a number of policies and objectives to address flooding in the city from all potential sources of flooding.

Furthermore, the Plan policies facilitate and encourage economic growth and renewal to strengthen the city as the state's main economic engine with an emphasis on innovation and clustering of economic activity while also encouraging energy efficiency, reduction of toxic emissions and greenhouse gases. Economic policies promote the promotion of sustainable development by balancing complex sets of environmental, social or economic goals in planning decisions, which can only prove to be positive for population and human health. The Plan policies and objectives are all geared towards facilitating a city to be more enterprising, connected, sustainable, inclusive and attractive.

The potential for negative impacts is focused on policies and objectives, which would result in provision of additional development and accompanying infrastructure which mainly impact on the environmental receptors of water,

landscape and biodiversity, flora and fauna. In particular, policies in relation to housing and consolidation of the city could have potential negative impacts on biodiversity, flora and fauna and water quality due to existing limitations on wastewater treatment capacities. A policy has been included in the Plan to ensure that development is permitted in tandem with available water supply and wastewater and to manage development so that new schemes are permitted only where adequate capacity or resources exists or will become available within the life of a planning permission.

Policies promoting significant regeneration, redevelopment of areas and promotion of taller buildings were found to have potential significant adverse impacts on the city's natural landscape. However, the consolidation of the city and intensification of development in areas of the city well connected by public transport could avoid greenfield development by reuse of brownfield sites and thereby have a positive impact on the natural environment.

Mitigation

Annex 1 (g) of the SEA Directive requires that the SEA Environmental Report describe the measures envisaged to prevent, reduce and/or offset as fully as possible any significant adverse effects on the environment from implementation of the Development Plan. Potential significant adverse impacts arise as a result of policies/ objectives to facilitate additional population, economic growth and development, increasing densities and generally facilitating intensification of the city, promoting increased access to recreational areas, opening up private recreational areas and promoting taller buildings in some locations of the city. While these policies are fully in line with national and regional policy to consolidate and

ensure a more compact city with greater intensity of uses and to ensure that the city's role as the economic engine of the state is strengthened there is potential for significant adverse impacts on the receiving environment unless mitigated against.

Dublin City Council placed sustainability as the overarching theme from the outset of the preparation of the Plan. The creation of a compact, green and connected city made of sustainable neighbourhoods informed the preparation of the core strategy and the policies and objectives of the Development Plan from the outset. The Plan also contains planning policies for a sustainable city and region which set out a new initiative to underpin the sustainable approach taken in the Plan.

At the initial stage of development of the Plan the SEA and AA teams made a number of suggestions to amend or insert a number of text changes to many of the policies, which are documented in **Chapter 09** of the SEA Environmental Report. Included within this was the assurance that future consolidation and development within the city would be in line with relevant environmental surveys to ensure protection of the natural environment.

In addition further policies and objectives have been included within the Plan focusing on key areas such as climate change and wastewater treatment and water supply. Since the last Plan there have been a number of changes to public water services as Irish Water became responsible for the supply of drinking water and the collection, treatment and disposal of wastewater. Policies have therefore been included to ensure that development is permitted in tandem with available water supply and wastewater disposal facilities and to support and facilitate the work being undertaken by Irish Water.

Table 7 below identifies the key mitigation measures that have been integrated into the Plan in response to the likely significant environmental effects which would occur as a result of Plan implementation in the absence of mitigation. The integration of these measures into the Plan occurred over a number of iterations and was informed by various communications through the SEA process with the Development Plan team who would put upfront mitigation policies/objectives into the plan.

Table 7: Key Mitigation Measures

Potential significant impacts if unmitigated	Environmental considerations that have been integrated into the Plan
<p>1. Increase in the number of flood events due to increased development pressure on the land and hard surfacing areas of the City</p>	<p>CC1: Policy to prioritise measures to address climate change CC5: Policy to address flood risk at strategic level through the process of strategic flood risk assessment and through improvements to the city’s flood defences SI8: Policy to mitigate the effects of floods and droughts SI9: Policy to develop catchment based Flood Risk Management Plans for rivers, coastlines and estuaries SI10: Policy to have regard to the Flood Risk Management Guidelines SI11: Policy to protect integrity of Flood Defence Infrastructure SI12: Policy to comply with the Strategic Flood Risk Assessment SI13: Policy regarding basements and flooding SI14: Policy to protect coastline from flooding SI15: Policy to minimise the risk of pluvial flooding SI16: Policy to minimise flood risk from all other sources SI17: Policy to require an environmental assessment of all proposed flood protection or flood alleviation works SI18: Policy regarding use of SUDS GI2: Policy requiring AA screening for plans/projects GI4: Policy regarding GI and flooding GI9: Policy regarding multifunctional role of GI including urban drainage and flood management objectives (SIO8, SIO9, SIO10, SIO11, SIO12, SIO13, SIO14, GIO28, GIO29)</p>
<p>2. Failure to tackle climate change and emissions from transport and issues regarding climate change</p>	<p>CC1: Policy to address climate change CC2: Policy to mitigate the impacts of climate change CC3: Policy to promote energy efficiency CC5: Policy to address flood risk at strategic level SI8: Policy to mitigate the effects of floods and droughts GI9: Policy to integrate open space into the GI network for the city, providing multifunctional role, including: drainage, flood management, biodiversity, outdoor recreation and carbon absorption MT2: Policy to promote modal shift from private car to more sustainable transport modes</p>

Table 7 (ctd): Key Mitigation Measures

Potential significant impacts if unmitigated	Environmental considerations that have been integrated into the Plan
3. Loss of biodiversity with regard to European sites and annexed habitats, and species and loss of biodiversity to designated sites, including wildlife sites and listed species	GI1: Policy to develop a green infrastructure network through the city, thereby interconnecting strategic natural and semi natural areas GI2: Policy requiring AA screening for plans and projects GI3: Policy to develop linear parks, particularly along waterways GI6: Policy to support and implement the objectives of the National Landscape Strategy GI7: Policy to protect landscapes, including existing green spaces GI9: Policy to integrate open space into the GI network for the city, providing multifunctional role, including: drainage, flood management, biodiversity, outdoor recreation and carbon absorption GI10: Policy to protect/enhance public open spaces GI11: Policy to seek provision of additional spaces in areas deficient in public open spaces, such as pocket parks or development of institutional land GI14: To promote development of soft landscaping and SUDS GI15: Policy to protect character of watercourses in the city GI16: Policy to improve the natural character and ecological value of all rivers GI17: Policy to develop sustainable coastal, estuarine, canal and riverine recreational amenities GI19: Policy to promote coordinated approach to the management of Dublin Bay GI21: Policy to reduce marine pollution in Dublin Bay GI23: Policy to protect flora, fauna and habitats GI24: Policy to conserve and manage all NHAs, SACs and SPAs GI25: Policy regarding habitat creation/maintenance and facilitate biodiversity GI26: Policy regarding non designated areas of ecological importance GI28: Policy to support implementation of the Dublin City Tree Strategy GI29: Policy to adopt proactive approach to tree management GI30: Policy to encourage more tree planting
4. Short term impacts as a result of construction work on noise and air quality in the city	SI24: Policy to monitor and improve air quality SI25: Policy to preserve and maintain air and noise quality objectives (SIO20, SIO21, SIO22, SIO23, SIO24, SIO25, SIO26, SIO27, SIO28, SIO29)
5. Potential adverse impact on quality and status of water bodies	SI4: Policy to promote and maintain good status in water bodies SI5: Policy regarding enhancement of aquatic ecosystems SI6: Policy to protect aquatic environment SI7: Policy to reduce pollution of groundwater GI15: Policy to maintain and improve character and/ of watercourses in the city GI16: Policy to protect the character and ecological value of all rivers within DCC GI19: Policy to ensure co-ordinated approach to management of Dublin Bay GI20: Policy for improvement of water quality, bathing facilities and other recreational opportunities in the coastal, estuarine and surface waters GI21: Policy to reduce marine pollution in Dublin Bay

Table 7 (ctd): Key Mitigation Measures

Potential significant impacts if unmitigated	Environmental considerations that have been integrated into the Plan
<p>6. Limitations of Wastewater Treatment Facility at Ringsend, which could lead to deterioration of water based habitats and species and to the quality of water</p>	<p>SI1: Policy to support Irish Water: provision of high quality drinking water and waste water treatment facilities</p> <p>SI2: Policy to support Irish Water in upgrading of wastewater infrastructure and Greater Dublin Regional Wastewater Treatment Plant, and Marine Outfall and orbital sewer</p> <p>SI3: Policy to ensure development is permitted in tandem with available water supply and wastewater treatment</p>
<p>7. Failure to comply with the drinking water regulations and to provide new development with a clean water supply</p>	<p>SI1: Policy to support Irish Water: provision of high quality drinking water and wastewater treatment facilities</p> <p>SI2: Policy to support Irish Water in upgrading of wastewater infrastructure and Greater Dublin Regional Wastewater Treatment Plant, and Marine Outfall and orbital sewer</p> <p>SI3: Policy to ensure development is permitted in tandem with available water supply and wastewater treatment</p>
<p>8. Increase in waste levels</p>	<p>SI19: Policy to support good waste management</p> <p>SI20: Policy regarding material sorting/recycling</p> <p>SI21: Policy to minimise amount of waste</p> <p>SI22: Policy regarding polluter pays principle Objectives (SIO15, SIO16, SIO17, SIO18, SIO19)</p>
<p>9. Effects on entries to the Record of Protected Monuments and Places and other archaeological heritage</p>	<p>CHC9: Policy to protect and preserve national monuments</p> <p>CHC10: Objective to implement archaeological actions of Dublin City Heritage Plan 2002–6, in light of the review 2012</p> <p>CHC15: Policy to preserve historic elements of significance in the public realm</p>
<p>10. Effects on entries to the Record of Protected Structures</p>	<p>CHC1: Policy to seek the preservation of the built heritage of the city</p> <p>CHC2: Policy to ensure that the special interest of protected structures is protected</p> <p>CHC3: Policy to identify and protect exceptional buildings of late twentieth century</p> <p>CHC4: Policy to protect the special interest and character of Dublin's Conservation Areas</p> <p>CHC5: Policy to protect protected structures and preserve the character and the setting of Architectural Conservation Areas</p> <p>CHC6: Policy to ensure a sustainable future for historic and other buildings subject to heritage protection</p>

Table 7 (ctd): Key Mitigation Measures

Potential significant impacts if unmitigated	Environmental considerations that have been integrated into the Plan
<p>11. Potential adverse impacts arising from visual impacts on the landscape</p>	<p>SC16: Policy to recognise Dublin as predominately low rise whilst also recognising the potential and need for taller buildings in a limited number of locations</p> <p>SC17: Policy to protect skyline of the inner city</p> <p>SC18: Policy regarding provision of tall buildings</p> <p>GI7: Policy to protect landscapes</p> <p>GI8: Policy regarding views and prospects in relation to landscape and natural heritage</p> <p>Objective GIO8: to undertake a views and prospects study to identify key views and prospects of the city</p> <p>Objective SCO4: to undertake a views and prospects study</p>

Monitoring

Article 10 of the SEA Directive requires that monitoring be carried out in order to identify at an early stage any unforeseen adverse effects due to implementation of the Development Plan, with the view to taking remedial action where adverse effects are identified through monitoring.

Monitoring will be based around the Environmental Protection Objectives, Indicators and Targets. The Objectives, Indicators and Targets for the various environmental topics are set out in **Table 8**. The indicators chosen will show changes that would be attributable to the implementation of the Development Plan and are at a level that is relevant to the Plan and are collated and reported on by a variety of government agencies.

Monitoring proposals must concentrate on likely significant environmental effects, which have been identified in the Environmental Report and the measures identified as necessary to prevent, reduce, or offset any significant adverse effects. The indicators/monitoring will act as an early warning sign so that appropriate remedial action is undertaken.

Table 8 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated.

Table 8: Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Population and Human Health	To create a sustainable compact city and a high quality healthy safe environment in which to live, work and/ or visit	Sustainable densities achieved in new residential/ mixed use schemes	Average density of new residential development	Every 2 years	Planning and Property Development Department (PPDD)
		Increase the number of residential properties	Percentage increase of residential properties	Every 2 years	(PPDD)
		Improved access to community and recreational facilities	Percentage increase in the number of schools/ crèches/ community parks/ sports facilities and primary health centres	Every 2 years	(PPDD)

Table 8 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Biodiversity, Flora and Fauna	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features	Maintain the favourable conservation status of all habitats and species which are within designated sites protected under national and international legislation and also habitats and species outside of designated sites	Number of developments granted planning permission within designated sites.	Every 2 years	(PPDD) Parks and Landscape Services
			Number of Natura Impact Statements submitted to Dublin City Council	Every 2 years	Parks and Landscape Services
			Percentage increase or decrease of bat and otter populations in Dublin city	Every 2 years	Parks and Landscape Services
		Deliver the objectives of the Dublin City Biodiversity Action Plan 2015–2020	Number of objectives/ policy actions delivered by the biodiversity plan	Every 2 years	Parks and Landscape Services
		Implementation of the actions from the green infrastructure strategy for Dublin city	Number of projects delivered by the green infrastructure strategy	Every 2 years	(PPDD) Parks and Landscape Services
			Totals of or reduction in the quantum of greenfield lands; length of linked green corridors		(PPDD) Parks and Landscape Services
		Control and protect against the spread of noxious weeds and invasive species	Number of projects within the city that have identified noxious weeds and invasive species	Every 2 years	(PPDD) Parks and Landscape Services

Table 8 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		Achieve the objectives of the Tree Strategy and Canopy Survey for Dublin city	Percentage increase of tree planting within Dublin City	Every 2 years	(PPDD) Parks and Landscape Services
			Tree canopy cover within the city area to contribute to carbon sequestration (no. of trees)	Every 2 years	Parks and Landscape Services
		Implementation of setback/ buffer zones of 10 m for development along watercourses	Number of planning applications adhering to the 10 m buffer zone setback	Every 2 years	(PPDD)
		Increased provision for soft landscaping in existing and new developments	Amount of open space provided in planning applications for Z10 and Z15 lands	Every 2 years	(PPDD)
		Maintain air quality status and meet value targets for named pollutants in line with Air Quality Framework Directives	Values of monitored pollutants in the air, including the levels of Nitrogen Oxides (NO _x) and Particulate matter (PM ₁₀) not breach regulation limits	Every 2 years	Roads and Traffic – Noise and Air Section
		Decrease greenhouse gas emissions in line with national targets	Average energy consumption of new residential housing stock, tonnes of CO ₂ / year	Every 2 years	Energy Division

Table 8 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible	
Climatic Factors Air Quality	Contribute to the mitigation of/ and adaptation to climate change and implement requirements of Strategic Flood Risk assessment	Increase energy efficiency (reduce energy waste) from renewable energy sources in line with the National Energy Efficiency Action Plan	Number of objectives implemented from Dublin City Energy Strategy	Every 2 years	Energy Division	
			Number of permitted developments that include district heating	Every 2 years	Energy Division	
			Number of permitted developments incorporating solar renewables	Every 2 years	Energy Division	
			Number of (social) housing units, public buildings and community centres connected to district and group heating systems	Every 2 years	Energy Division	
	Minimise emissions of pollutants to air associated with development activities and maintain acoustic quality		Produce noise maps for Dublin city and ensure they are updated	Number of zonings that conflict in relation to acoustic increases	Every 2 years	Roads and Traffic – Noise and Air Section
			Increase modal shift to public transport, walking and cycling	Percentage/ quantum of population travelling to work by public transport, walking and/ or cycling	Every 2 years	Roads and Traffic
			Compliance with the requirements of the Development Plan's Strategic Flood Risk Assessment	Percentage of planning applications compliant with the SFRA	Every 2 years	(PPDD) Environment and Engineering – Water Division

Table 8 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		Compliance with the OPW's Guidelines for Planning Authorities – The Planning System and Flood Risk Management	Percentage of planning applications incorporating flood risk assessment and conditions requiring appropriate flood resilient measures for new developments	Every 2 years	(PPDD) Environment and Engineering – Water Division
		Implement sustainable urban drainage systems in all new developments	Number of sustainable urban drainage systems implemented in new planning applications	Every 2 years	(PPDD) Environment and Engineering – Water Division
Water	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation, including the River Basin Management Plan of the Eastern River Basin District	Achieve and maintain good status of all surface water bodies	Improvement in Status of Water Body as per RBMP	Every 2 years	Environment and Engineering – Water Division
		All designated bathing waters to comply with the requirements of the Bathing Water Quality Regulations 2008 (S.I. 79 of 2008)	Bathing waters comply with requirements of Bathing Water Regulations	Every 2 years	Environment and Engineering – Water Division
		Identify and provide surface water pipelines as appropriate	Lengths of new surface water pipeline installed	Every 2 years	Environment and Engineering – Water Division

Table 8 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Material Assets	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population	Develop public transport, cycleways and road infrastructure to facilitate sustainable growth and travel patterns	Percentage change in commuting modal shift to sustainable travel modes	Every 2 years	Environment and Transportation
		Extend and improve the cycling and walking network	Number of new cycling and walking schemes implemented	Every 2 years	Environment and Transportation
		Comply with the Eastern Midlands Waste Management Plan and operate sustainable waste management practices	Quantum of residential and commercial waste reused and recycled	Every 2 years	Engineering – Waste Management
		Protect and enhance green infrastructure	Number of greenfield sites developed	Every 2 years	(PPDD) Parks and Landscape Services

Table 8 (ctd): Objectives, Targets and Indicators

Table 8 (ctd): Objectives, Targets and Indicators

01

Introduction

1.0 Introduction and Background

This is the Environmental Report prepared as part of the Strategic Environmental Assessment (SEA) of the Dublin City Development Plan 2016–2022, hereafter referred to as the ‘Dublin City Development Plan’ or ‘The Plan’. The SEA Environmental Report should be read in conjunction with the Dublin City Development Plan 2016–2022, and the Natura Impact Report. This report describes the assessment of the likely significant effects on the environment of implementing the plan.

Under the Planning and Development Act 2000, as amended, each Planning Authority is obliged to prepare a development plan for its functional area every six years, the review of which should commence four years after its adoption. Accordingly Dublin City Council in November 2014 gave notice that it intended to review the existing 2011–2017 Dublin City Development Plan and to prepare the Dublin City Development Plan 2016–2022. The Plan has been prepared in accordance with Section 11 and 12 of the Planning and Development Act 2000 (as amended).

Pursuant to Article 13B of the Planning and Development (SEA) Regulations 2004 and 2011 and Articles 6(3) and (4) of the Habitats Directive, Dublin City Council also proposes to carry out Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) as part of the Development Plan Review.

1.2 Strategic Environmental Assessment

Strategic Environment Assessment is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest stage of decision-making on a par with economic and social considerations. The SEA process is undertaken using a methodical iterative approach. The methodology followed in this report is derived from a number of sources, including the appropriate legislation and guidance documents prepared on a national and EU level.

1.3 SEA Guidance Documents

In the development of this SEA Environmental Report, appropriate consideration and reference has been made to a number of guidance documents, including, but not limited to the following:

- Integrating Climate Change into Strategic Environmental Assessment in Ireland – Guidance Note. Environmental Protection Agency (2015).
- Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland, Synthesis Report (EPA, 2003);
- SEA Scoping Guidance Document (EPA, 2010);
- SEA Environmental Report and Plan Template (EPA, 2010);

- SEA Process Checklist (Consultation Document) (EPA, 2010); Implementation of the SEA Directive (2001/42/EC), Assessment of the Effects of Certain Plans and Programmes on the Environment, Guidelines for Regional Authorities and Planning Authorities (Department of Environment, Heritage and Local Government (DOEHLG), 2004;
- Integrated Biodiversity Impact Assessment – Streamlining AA, SEA and EIA Processes: Practitioner’s Manual, EPA, 2013.

1.4 SEA Directive and its transposition into Irish Law

Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27 June 2001, on the Assessment of the Effects of Certain Plans and Programmes on the Environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use planning.

The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (Statutory Instrument Number (SI No. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of Regulations became operational on 21 July 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011) and the Planning and Development (Strategic Environmental

Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011).

Under this legislation member States of the EU are obliged to assess the likely significant environmental effects of Plans and Programmes (P/P) prior to their adoption thus providing for the assessment of strategic environmental considerations at an early stage of the decision making process.

1.5 Habitats Directive Assessment

Article 6.3 of the European Union (EU) Habitats Directive (92/43/EEC) requires that ‘any plan or project’ not directly connected with or necessary to the management of European Sites, but likely to have a significant effect thereon, shall be subject to an Appropriate Assessment (AA) of its implications for the site in view of the site conservation objectives’.

Habitats Directive Assessment is an iterative process which runs parallel to and informs both the plan making process and the Strategic Environmental Assessment Process. It involves analysis and review of policies as they emerge during each stage of plan making, to ensure that their implementation will not impact on sites designated for nature conservation, nor on the habitats or species for which they are designated. Within this process, regard must also be had to the potential for policies to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans or policies.

1.6 Strategic Flood Risk Assessment

As part of the review of the Dublin City Development Plan, and in compliance with the Department of the Environment, Heritage and Local Government/Office of Public Works Guidelines and Technical Appendices, 'The Planning System and Flood Risk Management' (2009), Dublin City Council undertook a Strategic Flood Risk Assessment (SFRA) which is documented in **Volume 7**.

1.7 Stages of SEA

The steps involved in SEA are:

1. Screening (determining whether or not SEA is required)
2. Scoping (determining the range of environmental issues to be covered by the SEA. As part of the review of the Dublin City Development Plan a scoping report was sent to the Environmental Bodies on 30 March 2015).
3. Collection of Baseline Data, assessment and preparation of an Environmental Report.
4. The carrying out of consultations with designated environmental authorities on environmental report of the plan.
5. The integration of environmental considerations into the Plan or Programme.
6. The publication of information on the decision (SEA Statement) identifying how environmental considerations were integrated into the final adopted plan.
7. Monitoring of significant environmental effects following adoption and implementation of the Plan.

1.8 Difficulties Encountered

As part of the Baseline for the Environmental Report, no new research was undertaken and information was generally gated from existing sources of data. There were a number of areas where up-to-date data was not available:

- Lack of up-to-date habitats surveys for Dublin city, this has not been updated so insufficient baseline data on habitats and species to allow for on-going monitoring.
- Lack of guiding legislation on soils and their conservation.
- Lack of a centralised data source for environmental baseline data.
- In relation to climate change it should be noted that continued monitoring of the Sustainable Energy Action Plan will yield more accurate results in future, especially with introduction of new initiatives such as smart metering. Up-to-date information depends on a number of agencies conducting research and compiling data, as present all information tends to be at state level and at best provincial or regional level.
- In relation to Material Assets there was limited information available regarding traffic patterns for the Dublin City Council area. Annual Cordon Counts are undertaken for different transport modes at the canal cordons. This information is not available for areas outside of the canals, which will provide information on how people travel to work.

02

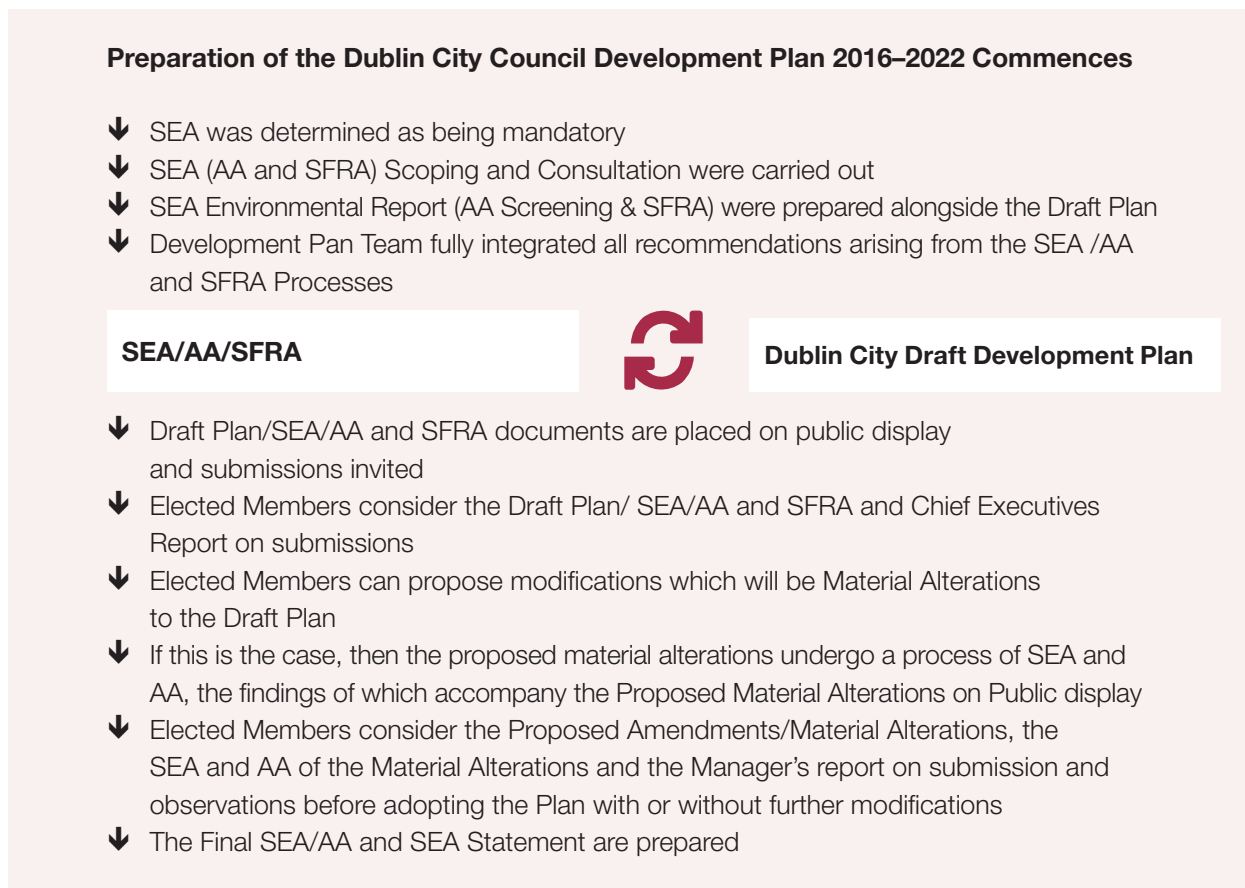
Strategic Environmental Assessment Methodology

2.1 Introduction

The methodology used to carry out the Strategic Environmental Assessment (SEA) of the Dublin City Development Plan 2016–2022 reflects the requirements of the SEA Directive (2001/42/EC) and SEA Regulations (S.I. 435 & 436 of 2004 and as amended by S.I. 200 & 201 of 2011) and other SEA guidance documentation. The requirements of the recent European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), have also been taken into account in implementing the Plan. These Regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in the Court of Justice of the European Union (CJEU) judgements.

Figure 2.1 below sets out how the SEA (including AA and SFRA) has been undertaken alongside the preparation of the Plan.

Figure 2.1: Dublin City Development Plan 2016–2022 and the SEA Stages



2.2 Integration of the Dublin City Development Plan, SEA and the Habitats Directive Assessment

The legislation and guidelines governing the SEA process state that the process of preparing the Dublin City Development Plan, SEA and Appropriate Assessment (AA) should be integrated and prepared in an iterative manner. The Environmental Report (ER) outlines how the SEA process was carried out in tandem with the preparation of the Development Plan 2016–2022 and its accompanying AA. The SEA process ensured that the Plan was informed by environmental considerations from the outset. The SEA team were fully involved in the analysis of development options and were in a position to make suggestions throughout the process of plan preparation to ensure that environmental considerations and environmental effects were considered in the formulation of strategic goals and development objectives.

The Strategic Flood Risk Assessment (SFRA) for the city has been carried out by a multidisciplinary team comprising the SEA team, Development Plan team, Engineering Department, Flood Resilient City Office, and also with outside mentoring from JBA consulting. A one-day workshop was held with JBA consulting to tease out all the issues for the SFRA, including issues such as climate change, residual risk, and also how to apply the Justification Tests to the flood cells in the city. This was an iterative process and informed the Development Plan team on various strategic land uses and zoning objectives for the city. Dublin City Council also met with the OPW, and their recommendations were taken on board in the SFRA, including additional policies on pluvial flood risk, policies to deal with basements and flooding, and also to refer to the recent

circular when applying the Justification Tests for the flood cells.

The Appropriate Assessment has also been fully incorporated into the Plan process. The Development Plan Team, including the SEA and AA team would meet on a regular basis to tease out any potential issues regarding the AA. Dublin City Council also appointed RPS consultants for external mentoring of the AA process. At an early stage the AA team sent out a Policy Guidance Note, which was an advisory note for the Development Plan Project Team to help avoid adverse impacts on the European sites. Upfront mitigation policies and objectives were included in the plan and were sent to the Plan team for inclusion in their chapters. The SEA and AA team also met with the National Parks and Wildlife Service (NPWS) and set out their approach to the AA for the Plan. The advice from the NPWS was incorporated into the AA. As part of the AA and SEA process, a workshop was held with RPS, to screen the policies and objectives of the plan for SEA and AA, and to ensure that any proposed mitigation measures were put into the plan.

In terms of SEA, this process has run in tandem with the preparation of the Plan. At an early stage, the SEA team prepared a Scoping Issues Paper that was sent to the Environmental Authorities for comment. We also received feedback from the Environmental Authorities on the SEA process from issues paper, which was feed into the SEA process. A Scoping Report was sent to the Environmental Authorities on 30 March 2015. Submissions were received from the Environmental Protection Agency, the Department of Arts, Heritage and the Gaeltacht, and the Department of Communications, Energy and Natural Resources on behalf of Geological Survey Ireland.

As part of the SEA process, a workshop was held with our consultants RPS, to discuss the choice of Alternatives for the SEA. This meeting was held with all of the Plan Team, the SEA and the Appropriate Assessment team. After the workshop the Plan team identified three viable realistic alternatives and set out the elements of the core strategy for the Plan.

The SEA and AA team also met with the Environmental Protection Agency and the NPWS and the OPW to ascertain any issues they may have in relation to the SEA and Flooding. All comments from these meetings were taken on board in the SEA process.

2.3 Key Stages in SEA

2.3.1 Screening

The screening process is the first stage of the Strategic Environmental Assessment. Screening assesses the need to undertake a Strategic Environmental Assessment. The Planning and Development (Strategic Environmental Assessment) Regulations S.I 436 of 2004 (as amended) by Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011, (S.I. 201 of 2011) make mention of the circumstances under which a proposed development must be accompanied by an Environmental Report. In the case of a Development Plan, the legislation automatically requires the provision of an Environmental Report in conjunction with the Plan, so screening was not required and the SEA proceeds to the next stage.

2.3.2 Scoping

Having established that SEA is mandatory for city and county development plans, the next step was scoping the contents of the Environmental Report (ER). The Scoping of the Dublin City Council Development Plan

2016–2022 was carried out in accordance with Article 5 (4) of the SEA Directive (2001/42/EC). Scoping is undertaken to ensure that the relevant environmental issues are identified allowing them to be addressed appropriately in the Environmental Report. Scoping is undertaken early in the process to ensure that all relevant issues are identified and dealt with.

Scoping involved formal consultation with the statutory consultees providing such bodies with an opportunity to comment on the highlighted issues and the proposed methodology. Under the Planning and Development (Strategic Environmental Assessment)(Amendment) Regulations 2011 the list of statutory consultees for Dublin City comprise:

- i. The Environmental Protection Agency (EPA),
- ii. The Minister for Environment, Community and Local Government,
- iii. The Minister for Arts Heritage and Gaeltacht Affairs (if potential significant impacts in relation to the architectural or archaeological heritage or to nature conservation)
- iv. The Minister for Agriculture, Fisheries and Food (if potential significant effect on marine environment / fisheries),
- v. The Minister for Communications, Energy and Natural Resources (if potential significant effect on marine environment / fisheries),
- vi. The Managers of the adjoining planning authorities (i.e. Fingal County Council, Dún Laoghaire-Rathdown County Council and South Dublin County Council).

In line with best practice, a scoping issues paper was prepared by the planning authority to facilitate the consultation

process. Initial public consultation was carried out in December 2014 with the issuing of the scoping issues paper (22 December 2014) to the above-mentioned statutory environmental authorities.

Written feedback was received from the environmental authorities during the issues paper consultation period, which was taken on board. Following feedback from the environmental authorities on the scoping issues paper, a scoping report was prepared taking into account the recommendations and advice received from the environmental authorities and also those issues raised in the baseline studies carried out by the SEA team.

Devising the scoping report is considered good practice, although not statutorily required. The report presents the current understanding of the main key environmental issues and could also be used as a tool to generate further comment from stakeholders on the scope and approach of the SEA.

The Scoping Report was issued to the consultees in March 2015 and formal responses were received from:

- Environmental Protection Agency
- Department of Arts, Heritage and the Gaeltacht
- Department of Communications, Energy and Natural Resources (on behalf of Geological Survey Ireland)

The primary issues raised in the responses related to:

Feedback from Environmental Protection Agency (EPA)

The EPA has launched a new application for public authorities; a GIS based application, to allow key aspects of the environment to be

explored, to inform the SEA screening and scoping stage of plans and programmes. The Plan should include commitment to integrate and implement relevant aspects of the update to the River Basin Management Plans and associated programme of measure. Commitment to provide the required infrastructure needed to cater for development, and to collaborate with Irish Water in seeking to resolve these issues and to ensure provision of adequate and appropriate critical water and wastewater infrastructure to cater for future development in the area. The SEA should consider the potential effects on all designated sites with the Plan area and adjacent to the plan area and, in particular, consideration should be given for cumulative/ in-combination effects of the plan. Mitigation measures that address negative environmental issues should incorporate aspects of adjacent or higher level plans or programmes. A Flood Risk Assessment should be undertaken, and this should be taken into consideration for any new or existing zonings. Relevant aspects of the CFRAMS should be highlighted, and to implement relevant aspects. The importance of Green Infrastructure, the protection and enhancement of biodiversity, ecological corridors/linkages wetlands, etc. were highlighted in the submission. Consideration should be given to habitat mapping. Consider a review of the existing County Heritage Plan.

Feedback from Department of Communications, Energy and Natural Resources (DCENR)

In relation to soils and water, SEA should contain information on soils, geology, geological, heritage, surface water and groundwater. Data is available on the GSI website. Geological heritage is part of Dublin city's natural heritage and should feature in the Soils Geology chapter of the SEA. Refer to GSI website for information on material

assets mapping, air, noise and renewable energy sources (wind farms, etc.).

Feedback from the Department of Arts, Heritage and the Gaeltacht

The importance of green infrastructure/ heritage is set out in the issues paper, but not nature conservation. Submission sets out the legislation that the SEA/AA should adhere to. The feedback states that the plan should recognise the importance of protected species and the need to protect biodiversity. The feedback suggested that the Plan needed to include provisions to encourage management of features of landscape that are important to flora and fauna. Also to include the importance of hedgerows, bats and other protected species, and of rivers and wetland areas that are an important source of biodiversity. The feedback stated that the Plan should recognise the importance of protected species, and the need to protect biodiversity. It should include provisions to encourage management of features of landscape that are important to flora and fauna. The plan should take account of the guidelines for Planning Authorities on Flood Risk Management, and that ground and surface water should be protected. The draft plan should be screened for AA. The feedback suggested that the Plan look at cumulative and ex-situ impacts, and in combination effects with other local authorities. In terms of amenity development, they pointed out the negative impacts on biodiversity and designated sites particularly by the coast and along rivers as a result of development such as walking, cycling routes, seating, lighting, loss of riparian zone and moving of riparian zone, which can lead to erosion and added disturbance by humans. With regards to the SEA, they comment that it is important that the SEA process should take place in consultation with the teams working on

the plan and appropriate assessment, as each process can help inform the other to ensure that the objectives and policies in the Plan have no significant effects on the natural heritage.

The submissions to the scoping report were taken into consideration in the Plan, making process of the Plan and in the preparation of this Environmental Report.

2.3.3 Public Consultation

The consultation period for making of the Dublin City Development Plan commenced with the launch of an issues paper that was put on public display from 10 November 2014 to 14 January 2015. A series of information sessions were held throughout the city to inform the draft plan. A total of 303 written submissions together with the opinions and comments arising from the public consultation sessions, consultation with communities, infrastructure providers, sectoral groups, statutory agencies and adjoining local authorities were taken into account. The Members of Dublin City Council having considered the views expressed by the public proposed 394 pre-draft motions which were considered at the special council meeting on 5 May 2015 at which the Members gave direction to the Chief Executive (CE) regarding the strategic and policy issues to include in the draft plan. The CE prepared the pre-draft plan which was circulated out to the Members for their consideration only, on foot of which 561 motions were submitted. At the Special Council meeting, held on 16, 17 and 18 September 2015, the Members agreed the CE Report and CE Report on Motions, and agreed to put the draft plan on public display.

The draft plan was placed on public display from 1 October 2015 to 11 December 2015, together with the accompanying Environmental Report

(Strategic Environmental Assessment), the Appropriate Assessment and also the Strategic Flood Risk Assessment. A total of 1484 submissions/observations were received in response to this stage of the public consultation process. The CE's report was prepared which summarised the submissions received and provided a response and recommendation to the issues raised (CE Report March 2016).

The following observations were received in relation to the Strategic Environmental Assessment, Environmental Report from the Environmental Protection Agency (EPA) and from the Department of Arts, Heritage and Gaeltacht Affairs (DAHG).

With respect to issues raised in the submissions from the EPA, some were resolved in the CE's Report, and for others they were addressed by way of the Addendum to the SEA Environmental (ER).

Submission	Aspects of Submissions in Relation to SEA	Response/Outcome
Environmental Protection Agency (EPA)	The EPA note Dublin City Council's commitment to progress the Greater Dublin Wastewater Treatment Plan Marine Outfall and orbital sewer. They recommend that DCC ensure that this project is progressed in accordance with the requirements of the EIA, Habitats, Water Framework and Floods Directive	In the CE report on Submissions (March 2016) it was recommended that new text be inserted into Chapter 02 Vision and Core Strategic under Section 2.2.7 (page 12 of Plan) to read 'All future development of the city will be carried out in accordance with the requirements of the Habitats, Birds, Water Framework, Floods, SEA and EIA Directives' This was addressed as part of the Amendments to the Plan. See Ref No. 2.3, in the CE Report, page 10. (June 2016)
Environmental Protection Agency (EPA)	They note the wide ranging commitment to future sustainable development in areas such as housing, environmental infrastructure, movement and transport and SDRAs. They recommend a specific objective to ensure that for any planned/future development projects, including: infrastructural upgrades, new roads, community facilities, cycle paths, etc., that the requirements of the EIA, Habitats, Birds, Water Framework and Floods Directive respectively be taken into account	In the CE report on Submissions (March 2016) it was recommended that new text be inserted into Chapter 02 Vision and Core Strategic under Section 2.2.7 (page 12 of Plan) to read 'All future development of the city will be carried out in accordance with the requirements of the Habitats, Birds, Water Framework, Floods, SEA and EIA Directives' This was addressed as part of the Amendments to the Plan. (See Ref No. 2.3, in the CE Report, page 10, June 2016)
Environmental Protection Agency (EPA)	They note commitment to policies SI1 and SI2 and related objectives SIO1, and SIO2 to collaborate with Irish Water in promoting investment in water and drainage networks	This was noted
Environmental Protection Agency (EPA)	In relation to the Non Technical Summary (NTS) – To include key environmental summary maps which highlight the key environmental sensitivities /vulnerabilities in the Plan Area. To include overview information in relation to the key mitigation and monitoring measures	Agreed The NTS in the Environmental Report (ER) will be updated to include key environmental summary maps and to include key mitigation and monitoring measures

Submission	Aspects of Submissions in Relation to SEA	Response/Outcome
Environmental Protection Agency (EPA)	Section 3.5 under Relationships with other relevant Plans and Programmes. To include reference to the Proposed National (Climate) Mitigation Plan (NMP), and to include a commitment to integrating any relevant recommendations of the NMP following its adoption	Agreed Section 3.5 of the ER will be updated to include reference to the Proposed National Mitigation (Plan INMP).
Environmental Protection Agency (EPA)	Chapter 04 Baseline: Section 4.14.5.1 under Foul Sewage Treatment, include reference to recently published Focus on Urban Wastewater Treatment in 2013 (2014)	Agreed Section 4.14.5.1 of the ER will be updated to include reference to the report on Focus on Urban Wastewater Treatment 2013 (2014)
Environmental Protection Agency (EPA)	Section 4.9.2.2 This should be updated to include reference to the adopted National Landscape Strategy under Protection of City Landscape	Agreed Section 4.9.2.2 of the ER will be updated to include reference to the adopted National Landscape Strategy
Environmental Protection Agency (EPA)	Chapter 05: Environmental Protection Objectives: the heading Geological Features should be considered under EPO L1 Landscape and Soils	It should be noted that Geological features were considered as part of the assessment under the EPO L1
Environmental Protection Agency (EPA)	Table 10.1 Selected Targets, Indicators, Targets and Monitoring Sources: This is to include a commitment to reviewing as part of the monitoring programme the effectiveness of mitigation measures during the lifetime of the plan. Consideration to linking monitoring with the interim/mid-term plan review and reporting	Agreed Section 10.1 of the ER will be amended to include commitment to reviewing as part of the monitoring programme, the effectiveness of mitigation measures and linking monitoring to the mid-term review
Environmental Protection Agency (EPA)	EPA referred to standards set out in Chapter 16 with regards to appropriate remediation of contaminated lands prior to redevelopment and a request was made to see these commitments reflected in a specific policy	On foot of this submission, new section was inserted into Chapter 09 on Soil Remediation and also new Policy SI23 (See CE Report March 2016, pp 168-169)
Environmental Protection Agency (EPA)	The EPA referred to policies in the draft plan on Sustainable Urban Drainage Systems and a request was made to see a commitment to on-going maintenance and monitoring of these drainage systems which should be reflected in the plan	On foot of submission new text was recommended in Section 9.5.4, page 76 of draft plan 'Dublin City Council will carry out on-going maintenance and monitoring of the sustainable drainage systems within the public domain'. (See CE Report March 2016, pp 166-167)
Eastern Midlands Regional Assembly	Support the requirement for additional infrastructure capacity in water and wastewater to facilitate targeted growth under the RPGs	This was noted

Submission	Aspects of Submissions in Relation to SEA	Response/Outcome
<p>Office of Public Works</p>	<p>The OPW in their submission refer to the Justification Text, which is provided to ensure transparency and a consistent approach where development needs are weighted against risk. The submission points out that a precautionary approach suggested that this should be carried out with due care for all development in known or suspected flood risk areas, i.e. for historically zoned areas as well as those under construction for future developments. The OPW welcomes the commitment by DCC to adhere to these guidelines and the production of a SFRA. The OPW acknowledges that a stage 2 SFRA has been produced. They note that although the flood maps are based on best available data, and that maps include existing flood defences. The Flood Zone Maps should be based on the undefended scenario, as this will allow for assessment of residual risk due to failure/overtopping of existing defended. Consideration should be given to the benefit provided by flood defences but only once the Justification Test has been applied and passed. The Defence standard should be clearly outlined, e.g. 1 in 1000 year fluvial or 1 in 200 year coastal and that an assessment of the defence in terms of structural integrity is also important. OPW considers that as a result of the flooding of the River Poddle and other such streams that a blockage analysis should be carried out. They also point out that the ESB has inundation maps in the event of the unlikely occurrence of infrastructural failure or breach. OPW state that the LA should apply the appropriate level of FRA recommended in the guidelines. A balanced view of land usage and development should be taken and this can be achieved in full compliance with the guidelines</p>	<p>On foot of the submission from the OPW a number of amendments were made to the SFRA and also some of the flood maps. (See Volume 7)</p>

Submission	Aspects of Submissions in Relation to SEA	Response/Outcome
Department of Arts, Heritage and Gaeltacht Affairs (DAHG)	<p>To update and amend the legislation in SEA, NIR. The Wildlife Acts can be quoted as the Wildlife Acts 1976–2012</p> <ul style="list-style-type: none"> • The Flora Protection Order in force is the Flora (Protection) Order, 2015, S.I No. 356 of 2015 • The European Communities (Natural Habitats) Regulations 1997 have been revoked • The Birds and Natural Habitats Regulations in force are: <ul style="list-style-type: none"> • The European Communities (Birds and Natural Habitats) Regulations 2011, S.I NO 477 of 2011 • The European Communities *Birds and Natural Habitat)(Amendment) Regulations 2013, S.I No. 499 of 2014 • The European Communities (Birds and Natural Habitats)(Amendment) Regulations 2015, S.I No. 355 of 2015-12-15. <p>These can be called together as the European Communities (Birds and Natural Habitats Regulations 2011 to 2015)</p>	<p>Agreed</p> <p>To update the legislation where necessary</p>
Department of Arts, Heritage and Gaeltacht Affairs (DAHG)	<p>To amend Table 6 of the SEA Environmental Report. Take out reference to deliver the objectives of the Dublin City Biodiversity Action Plan 2008–2012. Objective GIO20 is to support the Biodiversity Action Plan 2015–2019. This needs to be amended. This should be amended in Objective GIO120 to read the Dublin City Biodiversity Action Plan 2015–2020.</p>	<p>Agreed</p> <p>To amend reference in the ER to the Dublin City Biodiversity Action Plan 2015–2020, where necessary</p>
Department of Arts, Heritage and Gaeltacht Affairs (DAHG)	<p>Draft Waterways Heritage Plan to be added to Table 3.3</p>	<p>Agreed</p> <p>Amend Table 3.3 of the ER to include reference to the Waterways Heritage Plan</p>
Department of Arts, Heritage and Gaeltacht Affairs (DAHG)	<p>Details of Codling Fault Zone SAC are now on www.npws.ie and information should be updated</p>	<p>Agreed</p>

Submission	Aspects of Submissions in Relation to SEA	Response/Outcome
Department of Arts, Heritage and Gaeltacht Affairs (DAHG)	To update section 4.14.1 to include the Bohernabreena reservoir	Agreed To amend Section 4.14.1 of the ER to include the Bohernabreena reservoir
Department of Arts, Heritage and Gaeltacht Affairs (DAHG)	Section 8.3 to be updated to consider projects, and in particular ex-situ impact of a new water source from the River Shannon to be considered	Agreed To update Section 8.3 of the ER to consider ex-situ impact of a new water source from the River Shannon
Irish Water (IW)	IW state set out their objectives with regard to both drinking water and wastewater strategic infrastructure capacity. IW will endeavour to secure provision of the infrastructure necessary to support the evolving population changes and economic activity, subject to necessary capital investment. All capital investment beyond the Capital Investment Plan 2014–2016 is subject to the agreement of the Commission for Energy Regulator (CER). IW is currently in the process of preparing a submission to the CER on the National Investment programme for the next Investment Plan 2017–2021. IW welcomes the policies and objectives in relation to Water services in the draft plan.	New text was added to Section 9.5, Section 9.5.1 Water Supply and Wastewater, insert new text in 3rd paragraph (page 72 draft plan), 'Irish Water is preparing the next Investment Plan (2017–2021)'

The Members, having considered the views by the public, which proposed 392 motions giving direction to the CE regarding strategic and policy issues to amend in the Draft Dublin City Development Plan. Again a CE report was prepared which provided a response and recommendation to each motion (CE Report May 2016).

The Members of Dublin City Council considered the draft plan and the CE Reports on Submissions and Motions, on the 30, 31 May and 1 June 2016, and resolved to amend the draft plan. As some of these amendments constituted material alterations to the draft plan, the Council resolved to place the proposed amendments on a further period of public consultation for four weeks, from the 21 June 2016 until the 19 July 2016. The proposed amendments were accompanied by an Addendum Report to the Strategic Environmental Assessment. A further supplemental report was published on the 6 July to the 4 August 2016, setting out a small number of additional amendments.

A total of 298 submissions/observations were received. The submissions to proposed amendments resulted in a number of minor amendments being made to various chapters, and a number of policies and objectives being amended. The SEA assessment found that while many recommendations for proposed changes clarified the position of the Development Plan, none gave rise to any significant SEA issues. The Chief Executive's report was prepared, which summarised

the submissions received and provided a response and recommendation to the issues raised (August 2016). The Members having considered the views by the public proposed 98 motions giving direction regarding the proposed amendments. Again a CE report was prepared that provided a response and recommendation to each motion (September 2016). Again a number of minor amendments were made to certain chapters in the Plan. The SEA assessment found that while many recommendations for proposed changes clarified the position of the Development Plan, none gave rise to any significant SEA issues.

The following observations were received from the Environmental Protection Agency (EPA) and from the Department of Arts, Heritage and Gaeltacht Affairs (DAHG).

Submission	Aspects of Submissions in Relation to SEA	Response/Outcome
<p>Department of Arts, Heritage, Regional and Rural and Gaeltacht Affairs</p>	<p>The Department consider that some of the proposed amendments may have the potential to impact on the natural heritage. These include the proposed upgrading of bridges, the new objectives SIO12A for coastal defence works, including Sandymount and Clontarf, and the Amendment to GI15 (ref. 10.6). Wording of Policy GI15 is unclear and should be clarified. Proposed amendment regarding bridges and GI15 have been deemed to have no significant impact on European sites (AA screening) and no impact on SEA. It would appear that SIO12A has not been assessed. Depending on the nature of the erosion protection there is a potential for a significant effect on European Sites and this issue needs to be screened for AA. In addition the AA will need to consider impacts on roosting and feeding areas for birds and impacts on annexed habitats. In combination effects of erosions protection need to be assessed. Any AA screening assessment made must include complete and precise findings and a conclusion capable of removing all reasonable scientific doubt as to the effect of the amendments proposed on qualifying interests on European Sites</p>	<p>In response to this the Proposed Policy SIO12A was deleted, and a new policy was recommended after SI16, 'SI17: To require an environmental assessment of all proposed flood protection or flood alleviation works'</p> <p>With regard to the impact of bridges, etc., an overriding statement has been put into the plan, which will ensure that all developments relating to movement and transport infrastructure, including any new or upgrading of bridges, will be subject to Article 6 EU Habitats Directive Assessment to ensure that there are no likely impacts on the integrity of European sites.</p> <p>Wording of Policy GI15 was further amended to include the sentence 'opening up to daylight where safe and feasible'</p>

Submission	Aspects of Submissions in Relation to SEA	Response/Outcome
Environmental Protection Agency	The EPA submission notes that the proposed new objectives GIO18A in relation to the Local Authority implementing a maintenance and improvement plan for the length of the Rive Dodder. The plan should reflect the relevant recommendations of the Eastern Catchment Flood Risk Assessment and Management – CFRAMs and associated Unit of Measurement. There is merit in linking the environmental related aspects of the proposed environmental management plan for the Dodder to ensure a co-ordinated flood risk management approach	It was recommended that Objective GIO18A be amended to insert new text at end to read ‘This plan should reflect the relevant recommendations of the Eastern Catchment Flood Risk Assessment and Management and associated Unit of Measurement Flood Risk Management Plan(s) and associated Environmental Reports’
Environmental Protection Agency	The EPA welcome the proposed additional policy CEE13 (Reference number 6.3), which commits to supporting the preparation and implementation of a strategic regional tourism related plan for the Dublin city region. There is a need to ensure that development is closely linked to the ability to provide the necessary critical service infrastructures and also a need to ensure that the proposed plan will provide an appropriate level of protection to environmental sensitivities /vulnerabilities	Material Amendment 2.3 requires that ‘All future development of the city will be carried out in accordance with the requirements of the Habitats, Birds, Water Framework, Floods, SEA and EIA Directives’
Environmental Protection Agency	The EPA note the additional amendments to the text in Section 8.3 Challenges (Reference number 8.3) There is also merit in acknowledging that the Department of Transport, Tourism and Sport is currently preparing the National Policy Framework for Alternative Fuels Infrastructure for the Transport Section (AFF). In this regard the Plan should support where appropriate the relevant aspects of the AFF upon its finalisation	Additional text was inserted in Section 8.3 to read ‘increasing significantly the existing mode share for active modes, i.e., walking and cycling, and supporting the forthcoming National Policy Framework for Alternative Fuels Infrastructure. (See CE Report on Submissions Received on Proposed Amendments, p. 34, August 2016)

At the special Council meeting on 23 September 2016, the Elected Members of Dublin City Council pursuant to Section 12(9) and 12(10) of the Planning and Development Act 2000, as amended, by resolution, decided to make the Development Plan. The Plan came into effect on 21 October 2016.

2.3.4 Environmental Baseline Data

A multidisciplinary team was established to create policy consistent documents and to examine the effects on the environment of implementing the objectives and policies. Objectives and Policies in the Development Plan (the Plan) were assessed and Development Scenarios for the city examined.

The main purpose of describing the existing environment is to identify the current state of the environment, against which the likely effects of implementing the Plan can be assessed. The baseline in this instance refers to the existing state of the environment in Dublin city.

The impacts of the Plan can be estimated as the difference in environmental conditions with or without implementation of the Plan. Dublin city's existing environment is characterised by way of a description of the environmental receptors as set out in SEA Directive, i.e:

- Population
- Human Health
- Biodiversity, Flora and Fauna
- Air
- Climatic Factors
- Water (surface freshwater, coastal, transitional, groundwater, bathing and water services {drinking water and wastewater treatment})
- Material Assets (transport and waste management)
- Cultural Heritage (including architectural and archaeological heritage)
- Soil and Landscape

RPS Consultants gathered the baseline data. Particular reference was given to those aspects of the environment that are experiencing particular plan-related problems.

The full baseline data is presented in **Section 4 – Characteristics of the Existing Environment in Dublin City** of this report.

2.4 Environmental Protection Objectives, Targets and Indicators

SEA objectives, referred to as Environmental Protection Objectives, are a recognised way of testing the environmental effects of the Plan. They serve a different purpose from the objectives of the Plan, though in some cases they may overlap. The environmental protection objectives are used to demonstrate whether the Plan will have a negative, positive or no impact on the environment, to compare the environmental effects of alternative plan scenarios and to suggest improvements, if necessary.

For the purposes of the environmental assessment of the Plan, relevant environmental protection objectives were set by the SEA team having regard to environmental protection objectives established in law, policy, other plans or programmes and from an in-depth knowledge of existing environmental issues to be addressed. Each environmental receptor had between one and four associated environmental protection objectives. For each objective a target was assigned along with measurable indicators which allows for monitoring.

Section 5 of this report sets out the Environmental Protection Objectives, Targets and Indicators set by the SEA team.

2.5 Identification, Description and Consideration of Alternatives

Article 5 of the SEA Directive requires the plan-making authority to identify, describe and evaluate alternative ways of realising the objectives of the plan. As stated in the Directive ‘an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.’ Article 13E of the SEA Regulations 2004 require the identification, description and evaluation of the significant effects on the implementing the plan, and reasonable alternatives and, in accordance with Schedule 2B an outline of the reasons for selecting the alternatives.

Dublin City Council, as the plan-making authority, was obliged, therefore, to consider alternative ways of achieving the objectives of the Plan for Dublin city. SEA involves a systematic and explicit appraisal of alternatives.

For the purposes of Dublin City Council’s Plan review, three possible realistic alternatives were identified, described and tested against the environmental protection objectives. These three alternatives are as follows:

- Alternative 1: Targeted growth around existing identified growth centres
- Alternative 2: Market-led growth
- Alternative 3: Selected concentration of growth targeted on existing SFRA/SFRAs/ KDC/SDZ areas – elements of a phased approach to the development of land

The alternatives were considered reasonable, realistic, capable of implementation and set at the appropriate level at which the Plan will be implemented operating within the planning hierarchy, i.e., the higher the level of the plan the more strategic the options which are available.

Section 6 of this report sets out the details of the alternatives identified.

Section 7 details the evaluations of the identified development plan alternatives.

2.6 Assessment of the Impact of the Dublin City Development Plan 2016–2022 on the Environment

The approach used for assessing the alternatives to the Plan is an objective led approach using assessment matrices, in line with current best practise for SEA. The assessment matrix tests whether the alternatives will have likely significant impacts (positive and negative, direct and indirect, cumulative and synergistic) for the defined Strategic Environmental Protection Objectives as outlined in **Table 2.1**.

Table 2.1: Strategic Environmental Protection Objectives

Environmental Receptor	Environmental Protection Objectives (EPOs)
Population and Human Health (PH1)	To create a sustainable compact city and a high quality safe environment in which to live, work and/ or visit
Biodiversity/Flora and Fauna (BFF1)	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features
Climatic Factors and Air Quality (CF1)	Contribute to the mitigation of/and adaptation to climate change and implement requirements of Strategic Flood Risk assessment
Climatic Factors and Air Quality (AQ1)	Minimise emissions of pollutants to air associated with development activities and maintain acoustic quality
Water (W1)	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation, including the River Basin Management Plan of the Eastern River Basin District
Material Assets (MA1)	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population
Cultural Heritage (CH1)	To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage
Landscape and Soils (L1)	To protect and where appropriate enhance the character, diversity and special qualities of Dublin city's landscapes and soils

The assessment matrices contain a comparison of each of the alternatives against each of the Strategic Environmental Protection Objectives with an assessment rating assigned for the purposes of comparison. As outlined in **Table 7.2**, a plus (+) indicates a potential positive impact, minus (-) indicates a potential negative impact, a (?) outlines that in the absence of further detail the impact is unclear, and a neutral or no impact is indicated by a zero (0). Combinations of these symbols are also possible, e.g. (+/-) indicates that both positive and negative impacts are likely or (0/-), which indicates that impact may be neutral or negative depending on how the policy or objective within the scenario is delivered. It should be noted that where impacts are increased, this increased level of impact has been recorded with double symbols, e.g. ++ or --.

Table 2.2: Evaluation Criteria

Will the implementation of the alternative serve to have:	
A significant beneficial impact on the environmental receptor	+
A significant adverse impact on the environmental receptor	-
An uncertain impact on the environmental receptor	?
An insignificant impact or no relationship with the environmental receptor	0

The initial stage aims to ascertain the quality, if any, of the potential impact. Each of the Plan's policies and objectives have been screened for their impact and where a neutral impact is noted no further discussion is provided within this report. This format allows for the environmental report (ER) to focus on the negative and positive impacts and proceed to a discussion on

their significance and duration. Thus it is a more robust, more focused approach to understanding the potential impact associated with the Plan's implementation. Finally, where it has been determined that a policies/objectives may potentially result in a negative impact on an ER appropriate level mitigation measures are proposed.

Section 8 of this report contains the findings of the detailed evaluation of the preferred alternative against the Environmental Protection Objectives.

2.7 Mitigation

Annex I of the SEA Directive requires the Environmental Report to include measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the plan. These measures are referred to as 'mitigation' measures. These mitigation measures include proactive avoidance of adverse effects on the environment as well as actions taken after any negative effects are noticed.

Section 9 of this report describes the measures devised to mitigate against any potential significant impacts of implementing the Dublin City Development Plan 2016–2022.

2.8 Monitoring

The significant environmental effects of the implementation of the Plan must be monitored in order to identify at an early stage unforeseen adverse effects and to allow for appropriate remedial action to be undertaken. A monitoring programme has been devised having regard to the existing monitoring mechanisms currently in place in Dublin City Council.

Section 10 of this report sets out the Monitoring Programme.

The SEA Statement which accompanies the final Plan includes information on:

- How environmental considerations have been integrated into the Plan, highlighting the main changes to the Plan which resulted from the SEA process;
- How the SEA Environmental Report and consultations have been taken into account, summarising the key issues raised in consultations and in the Environmental Report indicating what action was taken in response;
- The reasons for choosing the Plan in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects and explaining why the Plan as adopted was selected; and
- The measures decided upon to monitor the significant environmental effects of implementing of the Plan.

2.9 Report Preparation

This report has been prepared by Dublin City Council in conjunction with RPS Consultants.

2.10 Checklist on Information to be contained in the Environmental Report

Table 2.3: Checklist on information to be contained in the Environmental Report

Item	Information to be Contained in the Environmental Report	Relevant Section of the Report
A	An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes	Chapter 03: Context of the Dublin City Development Plan 2016–2022
B	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme	Chapter 04: Baseline Environment
C	The environmental characteristics of areas likely to be significantly affected	Chapter 04: Baseline Environment
D	Any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including, in particular, those relating to any areas of a particular environmental importance such as areas designated pursuant to the Birds Directive or the Habitats Directive	Chapter 03: Context of the Dublin City Development Plan 2016–2022 Chapter 04: Baseline Environment
E	The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation	Chapter 03: Context of the Dublin City Development Plan 2016–2022 Chapter 05: Environmental Protection Objectives
F	The likely significant effects* on the environment, including on issues such as: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, including architectural and archaeological heritage, landscape and the interrelationship between the above factors	Chapter 07: Evaluation of Development Plan Alternatives Chapter 08: Evaluation of the Dublin City Development Plan 2016–2022
G	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme, or modification to a plan or programme	Chapter 09: Mitigation Chapter 10: Monitoring
H	An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken, including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter 02: SEA Methodology Chapter 04: Baseline Chapter 06: Alternative Scenarios Chapter 07: Evaluation of Alternative Scenarios
I	A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme	Chapter 09: Mitigation Chapter 10: Monitoring
J	A non-technical summary of the information provided under the above headings	Non-technical Summary

03

Context of Dublin City Development Plan 2016–2022

3.1 Review Process

Under the Planning and Development Act 2000, as amended, each Planning Authority is obliged to prepare a development plan for its functional area every six years, the review of which should commence not later than four years after its adoption. Dublin City Council in November 2014 gave notice that it intended to review the existing 2011–2017 Dublin City Development Plan and to prepare the Dublin City Development Plan 2016–2022. The Dublin City Development Plan 2016–2022 has been prepared in accordance with Section 11 and 12 of the Planning and Development Act 2000 (as amended). A number of background documents were also made available dealing with:

- Shaping the City
- Climate Change Mitigation/Adaption and Resilience
- City and Regional Economy
- Movement and Transport
- Population and Housing
- Sustainable Environment and Infrastructure
- Green Infrastructure
- Retailing
- Arts and Culture
- Built Heritage
- Community Infrastructure and Sustainable Communities.

In total 303 submissions were received on the issues paper. Submissions received were considered and included in the Chief Executive's Report to the Elected Members of the Council on 5 May 2015. A total of 394 motions were also received from Councillors for inclusion in the Plan. A Chief Executive's Report (No.142.2015) was sent to the Special Meeting of the City Council on 5 May 2016. Following this meeting the Councillors either agreed or not agreed with the Chief Executives Report, and this was circulated to the Planners for inclusion in the Development Plan.

3.2 Dublin City Council Profile

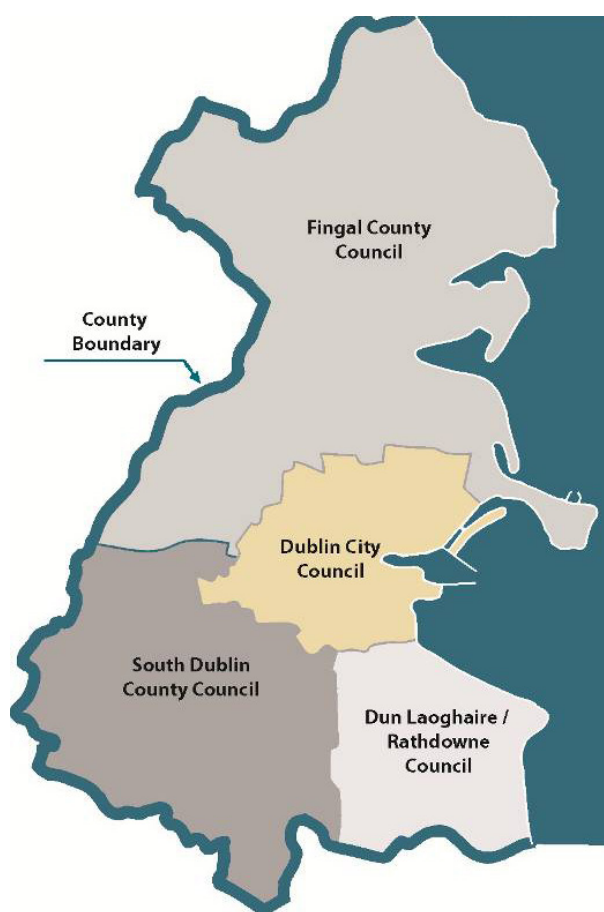
The Dublin Region comprises of the four constituent city council administrative areas of Dublin City, South Dublin County Council, Dún Laoghaire-Rathdown County Council and Fingal County Council.

The administrative area of Dublin city covers an area of 115 sq.km. Dublin city is divided into five administrative areas, called Local Areas, which co-ordinate the delivery of services in the community.

Dublin city is endowed with a spectacular setting on Dublin Bay, and a wealth of amenities. The city is shaped by its natural and man-made features. The river Liffey, together with the areas between the canals, containing both the old city and the world famous Georgian squares, all help to convey the city's strong character and identity.

Within the zone of influence of Dublin city there are a number of designated sites that constitute part of the Irish and European network of protected areas for biodiversity. There are five river sub catchments (or water management units) within Dublin city, including the Cammock, the Dodder, the Santry/Mayne/Sluice, the Tolka and the river Liffey, and these support a significant resource, including: otters, bats, Atlantic salmon, kingfisher, etc., many of European importance. The city has significant green spaces through the provision of parks such as the Phoenix Park in particular, St Anne's Park, and a number of institutional lands, including Trinity College. The city's parks contain significant wildlife resources, including: woodland, semi-natural grasslands and remnant hedgerows, etc.

Figure 3.1: Dublin Region



In 2011 Dublin city had a population of 527,612 persons, comprising of 257,303 males and 270,309 females. This equates to 11.5% (11.49%) of the state's population, which stood at 4,588,252 in April 2011. This percentage of 11.5% has reduced from 13.6% in 1991, reflecting significant growth levels outside the city in recent years rather than any population drop in the city. The city's population has been steadily increasing over time, having grown by 10% since 1991.

The population of the Dublin Region, comprising the four Dublin local authorities of Dublin City Council, Fingal County Council, Dún Laoghaire-Rathdown County Council and South Dublin County Council, in 2011 was 1,273,063. Dublin city's share of the Region's population is 41.4%. This is a much higher proportion than any of the other Dublin Local Authorities. However, in examining the inter-census percentage changes over the 1991–2011 period, Dublin city has lagged significantly behind both the state and other GDA Local Authorities in terms of rate of growth.

There was 24% growth in the Dublin Region as a whole over the 1991–2011 period. The growth rates in the three adjoining Dublin authorities vary, ranging from 11.5% (11.49%) in - Dún Laoghaire-Rathdown, 27% in South Dublin to 79% in Fingal. In the context of the Greater Dublin Area, the Mid-East Region (Kildare, Meath and Wicklow) has grown by 62.3% from 325,291 to 531,087 over the same inter-census period. Over this period, the population of the state has increased by 30% from 3,525,719 to 4,588,252. With regard to the wider area, census figures confirm that population dispersal is continuing in the Greater Dublin Area and beyond, with strong population growth across Leinster in a sporadic manner.

Figure 3.2: Dublin City



3.3 Dublin City Development Plan 2011–2017

The Dublin City Development Plan 2011–2017 provided for a coherent spatial framework for the delivery of sustainable development to ensure an improved quality of life for its citizens. The City Council identified six broad themes which are integral to the future growth of the city, which were:

- Economic
- Social
- Cultural
- Urban form/spatial
- Movement
- Environmental

The vision for Dublin set out in the this Development Plan was that ‘within the next 25 to 30 years, Dublin will have an established international reputation as one of the most sustainable, dynamic and resourceful city regions in Europe. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbours, all connected by an exemplary public transport, cycling and walking system and interwoven with a quality bio-diverse green space network. In short, the vision is for a capital city where people will seek to live, work and experience as a matter of choice’.

The Core Strategy of the Plan sets out to achieve the vision in a manner that is consistent with the guidance, strategies and policies at national, and regional level, in particular the National Spatial Strategy 2002–2020 (NSS), the Regional Planning guidelines for the Greater Dublin Area 2010–2022 (RPGs) and the governments Smarter Travel – A Sustainable Transport Future 2009–2020, all guide and direct the city councils housing, settlement and retail strategies.

All of the policies and objectives set out in the Plan flowed from and were consistent with this higher level of national and regional policies in that they promote intensification and consolidation of Dublin city, all of which lies within the metropolitan area.

The housing strategy for Dublin city was based on the settlement strategy, minimum population targets and housing unit allocations as prescribed in the RPGs 2010–2022. The available zoned residential land under the plan equates to 503ha, which is capable of meeting the RPGs housing unit allocation of 42,400 units for Dublin city for the period 2006–2016, while also allowing for a 50% headroom as advised by the DEHLG guidelines on Development Plans (2007).

The settlement strategy for the metropolitan area includes a strong emphasis on the need to gain maximum benefit from existing assets, such as public transport and social infrastructure. Dublin city in its entirety lies within the metropolitan area, and the RPGs give direction to Dublin city as the gateway core for high intensity clusters, Brownfield development urban renewal and regeneration. The Plan incorporates this into the Plan in the settlement hierarchy, which priorities the inner city, key developing areas, key district

centres and Strategic Development and Regeneration Areas (SDRAs).

The core strategy of the Dublin City Development Plan 2011–2017 was informed by Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) undertaken as a parallel process in tandem with the development plan, thereby ensuring full integration and consideration of environmental issues throughout the plan making process.

3.4 Dublin City Development Plan 2016–2022

The Dublin City Development Plan has been prepared by Dublin City Council under the provisions of the Planning and Development Act 2000 (as amended).

The Dublin City Development Plan 2016–2022 sets out a vision and overall strategy for the proper planning and sustainable development of the city for a six-year period. It also sets out guiding policies and objectives for the development of the city in terms of its physical growth, economic, social and cultural activities and environmental protection and enhancement.

The central aim of the Strategic Environmental Assessment (SEA) process is ensuring that the development proposed within the adopted Plan does not erode or place undue pressure on the natural resources or amenities of the city. SEA should lead to more sustainable development through the systematic appraisal of policy options.

Chapter 04 of the Dublin City Development Plan 2011–2017 provided a robust overview of ‘Shaping the City,’ which will remain largely intact

for this Plan. Chapter 04 sets out the strategic approach for the urban form and structure of the city, which is based on a number of key approaches that include: the creation of a more compact city thereby reducing urban sprawl; development of a well designed and defined network of streets and quality of urban spaces; the development of a green infrastructures strategy; creation of a sustainable neighbourhoods close to public transport; and the integration of a cultural and social vision into place-making.

The core strategy of the Plan seeks to create a compact, quality, green, well connected city with a mix of uses that generates real long-term economic recovery with sustainable neighbourhoods and socially inclusive communities. It establishes a spatial hierarchy for the city, which prioritises the inner city, key developing areas, key district centres, and strategic development and regeneration areas. The strategy seeks to expand the city centre towards the Docklands, Heuston and Grangegorman; develop sustainable urban villages such as Rathmines and Crumlin; and make new developing / regeneration areas such as the North Fringe and Docklands.

Since the adoption of the Dublin City Development Plan 2011–2017, the full range of census reports has been published. The population of Dublin city grew by 3.8%, from 506,000 in 2006 to 527,612 in 2011. However, over the last decade, Dublin city has lagged behind national population growth and growth in the other GDA local authorities. In 1991 Dublin city had 35% of the GDA population, but this had decreased to 30% by 2011. This reflects the growth of population and housing in counties

such as Fingal, Meath and Kildare and as a consequence the travel to work catchment for Dublin city is expanding. Levels of growth of the four Dublin authorities have varied significantly over the last 20 years.

While it is critical that Dublin retains its role as the economic driver of the region, the census findings and recent growth predictions reinforce the need to accommodate the expansion and consolidation of the city. Evidence of significant population growth in some parts of the city, in particular the new docklands area, suggests that the city’s policy of consolidation is having a positive impact.

Currently Dublin City Council has a total of 10074 hectares (ha in tables) of zoned land, zoned for different uses in the current Plan. The total amount of land within Dublin City Council boundary is 11760 hectares (this includes roads/footpaths, etc.). The table below outlines that amount of currently zoned land under each zoning.

Table 3.1 Amount of Zoned Land within Dublin City Council

Current Zoning		Area of Land Zoned
Z1	Residential (General)	3775 ha (37.5%)
Z2	Residential (conservation areas)	691 ha (7%)
Z3	Neighbourhood centres	60 ha (0.6%)
Z4	District centres (mixed use)	196 ha (2%)
Z5	City centre (mixed use)	239 ha (2.4%)
Z6	Employment/Enterprise (light)	619 ha (6%)
Z7	Employment (heavy)	243 ha (2%)
Z8	Conservation areas (40% commercial use)	85 ha (0.8%)
Z9	Amenity/open space lands	2589 ha (26%)
Z10	Inner suburb (mixed use)	85 ha (0.8%)
Z11	Waterways protection	114 ha (1%)
Z12	Industrial land (mixed use)	91 ha (0.9%)
Z14	Development and regeneration areas (mixed use)	514 ha (5%)
Z15	Institutional Land (L-T institutional use)	773 ha (8%)
Total Zoned Land:		10074 hectares

3.4.1 Content of the Plan

3.4.1.1 Vision

‘Within the next 25 to 30 years, Dublin will have an established international reputation as one of Europe’s most sustainable, dynamic and resourceful city regions. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse, smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbourhoods, all connected by an exemplary public transport, cycling and walking system and interwoven with a quality bio-diverse green space network. In short, the vision is for a capital city where people will seek to live, work, experience, invest and socialise, as a matter of choice’.

Our 30 year vision is for a zero carbon city with all energy coming from renewable energy sources. All buildings will have been built or retrofitted to near zero energy building standards, which will provide comfortable, warm living and working environments. We will halve the use of ‘conventionally – fuelled cars in urban transport by 2030 and phase them out by 2050; achieve essential CO₂ -free city logistics in Dublin by 2030. Within 30 years we will move close to zero fatalities in road transport. In line with this goal, we will aim to halve road casualties by 2022. This Council will work with its neighbouring local authorities and the National Transport Authority to achieve a doubling of all active travel and public transport trips and to halve private vehicular trips to Dublin by 2030.

3.4.1.2 Contents

The Dublin City Development Plan has been prepared by Dublin City Council and comprises of a written statement, maps, the Record of Protected Structures, various appendices, and the Environmental Assessments.

Volume 1: Written Statement

The plan is structured as follows:

Chapter	Chapter Title
Chapter 01	Strategic Context for the City Development Plan 2016–2022
Chapter 02	Vision and Core Strategy
Chapter 03	Addressing Climate Change
Chapter 04	Shape and Structure of the City
Chapter 05	Quality Housing
Chapter 06	City Economy and Enterprise
Chapter 07	Retailing
Chapter 08	Movement and Transport
Chapter 09	Sustainable Environmental Infrastructure
Chapter 10	Green Infrastructure, Open Space and Recreation
Chapter 11	Culture and Heritage
Chapter 12	Sustainable Communities and Neighbourhoods
Chapter 13	Monitoring, Implementation and Development Management
Chapter 14	Land Use Zoning
Chapter 15	Strategic Development and Regeneration Areas
Chapter 16	Development Standards

Volume	
Volume 1	Written Statement
Volume 2	The appendices are contained in a separate volume, which include the Housing Strategy, the Retail Strategy together with a number of other appendices
Volume 3	Zoning Maps
Volume 4	Record of Protected Structures
Volume 5	Strategic Environmental Assessment
Volume 6	Appropriate Assessment
Volume 7	Strategic Flood Risk Assessment

3.4.2 Structure of the Dublin City Development Plan 2016–2022

Table 3.2: Structure of the Dublin City Development Plan 2016–2022

Structure of the Dublin City Development Plan 2016–2022	
Chapter 01 Strategic Context for the City Development Plan 2016–2022	Chapter 01 sets out the background to making the plan and the context of the plan
Chapter 02 Vision and Core Strategy	Chapter 02 sets out the Vision and Core Strategy for the city in line with guidance, strategies and policies at national and regional level. Development Plans are now required by the Planning and Development Acts to be consistent with both Government/Ministerial Guidelines and the Regional Planning Guidelines. In particular the National Spatial Strategy 2002–2020, Smarter Travel – A Sustainable Transport Future, the National Climate Change Strategy, all guide and direct the national and regional policy framework for housing, settlement, retail, employment and transport strategies
Chapter 03 Addressing Climate Change	Chapter 03 this is a new chapter in the Development Plan Addressing Climate change will inform and imbue the overall Plan
Chapter 04 Shape and Structure of the City	Chapter 04 Shape and Structure of the City outlines the vision for the urban form and structure of the city, which is to achieve a high quality sustainable urban and natural environment that is attractive to residents, workers and visitors. Key approaches to achieving this vision are: the creation of a more compact city; the creation and nurturing of sustainable neighbourhoods; the creation of a critical mass to support and maintain real economic recovery; the development of well designed buildings and a network of streets and quality urban spaces; and the integration of strategic transportation programmes into the urban form and structure of the city
Chapter 05 Quality Housing	Chapter 05 sets out the general planning policies and principles for the provision of housing in Dublin city. The overall requirement for housing is set out in Chapter 02 the Core Strategy of this plan. The chapter also provides guidance on the approach to housing development, including housing density and consideration of housing mix and ‘Delivering Sustainable Communities; guidance by the Government. This chapter also sets out the housing strategy for the city
Chapters 6 –12	Chapters 6–12 detail the achievements, challenges, strategic approach and accompanying policies and objectives to guide the future sustainable development of the city, in line with the core strategy above, under the following topics: <ul style="list-style-type: none"> • City economy and enterprise • Retailing • Movement and transport • Sustainable environmental infrastructure • Green infrastructure, open space and recreation • Culture and heritage • Sustainable communities and neighbourhoods

Table 3.2 (ctd): Structure of the Dublin City Development Plan 2016–2022

Structure of the Dublin City Development Plan 2016–2022	
Chapter 13: Monitoring, Implementation and Development Management	Chapter 13 contains monitoring and implementation of the Plan. This chapter also sets out how development management objectives will be taken into account in planning applications
Chapter 14: Land Use Zoning	Chapter 14 sets out the general land uses and zoning policies and objective of the Plan. It provides an explanation of the land use categories and the zoning objectives that apply to them. The zoning policies and objectives are derived from the core strategy
Chapter 15: Strategic Development and Regeneration Areas: Guiding Principles for Development	Chapter 15 sets out the guiding principles for Strategic Development and Regeneration Areas (SDRAs). The majority of these sites are important components of the key developing areas set out in the core strategy. All of these sites deliver significant quantum of mixed uses to create synergies to regenerate areas
Chapter 16: Development Standards	Chapter 16 contains qualitative and quantitative standards. Qualitative standards include: design, layout, mix of new buildings and landscaping. Quantitative standards include: density, plot ratio, site coverage, height, access and road standards

3.4.3 Development Plan Objectives

In accordance with Section 10(2) of the Planning and Development Act 2000, as amended the Plan contains objectives and policies for, inter alia:

- the zoning of land for use solely or primarily areas for particular purposes (Chapter 14)
- the provision or facilitation of the provision of infrastructure (including transport, energy, communication facilities, water supplies, waste recovery, and disposal facilities) (Chapters 8 and 9)
- the conservation and protection of the environment (archaeology and natural heritage and conservation and protection of European Sites and any other sites) (Chapters 10 and 11)
- the integration of the planning and sustainable development of the area with the social, community and cultural requirements of the area and its population (Chapter 12)
- the preservation of the character of the landscape where, and to the extent that, in the opinion of the planning authority, the proper planning and sustainable development of the area requires it, including the preservation of views and prospects and the amenities of places and features of natural beauty or interest (Chapter 10)
- the protection of structures, or parts of structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, the preservation of the character of architectural conservation areas (Chapter 11)
- the development and renewal of areas in need of regeneration (Chapter 15)
- the provision of accommodation for travellers, and the use of particular areas for that purpose (Chapter 05)
- the preservation, improvement and extension of amenities and recreational amenities (Chapter 10)
- the control, having regard to the provisions of the Major Accidents Directive and any regulations, under

any enactment, giving effect to that Directive (Chapter 09)

- the provision, or facilitation of the provision, of services for the community including, in particular, schools, crèches and other education and childcare facilities, and the protection of the linguistic and cultural heritage of the Gaeltacht, including the promotion of Irish as the community language, where there is a Gaeltacht area in the area of the development plan (Chapter 11)

3.5 Relationship with other relevant Plans and Programmes

Development Plans must be framed within a hierarchy of plans and programmes from the international down to the local level (see Table 3.3). All Development Plans must be consistent, as far as practicable, with national plans, policies or strategies, as the Minister for the Environment, Community and Local Government determines related to proper planning and sustainable development. The Minister for the Environment Community and Local Government can issue guidelines to Planning Authorities regarding their planning functions and authorities must have regard to these. In addition, as a planning authority within the Greater Dublin Area, the Dublin City Development Plan must be consistent with the Transport Strategy prepared by the National Transport Authority, and it must be consistent with the Regional Planning Guidelines for the Greater Dublin Area. Finally, Development Plans must have regard to the Development Plans of adjoining authorities.

The Development Plan sets out the spatial framework for the city within the context of the hierarchy of plans, policies and strategies related to proper planning and

sustainable development. The review of the existing Development Plan and the making of a new Development Plan must be considered within this hierarchy of plans and policies, which are critical in the derivation of Environmental Objectives for Dublin City.

The following national, regional and local plans have influenced the policies contained in the Plan. This is not intended to read as an exhaustive list of relevant policy documents.

3.5.1 International Level

The Dublin City Development Plan sits within a framework of higher level policies to ensure the strategic development of the city in the broader regional, national and European context. European Directives require early and ongoing assessment of a Development Plan in terms of its potential impacts on the environment. These are applied through Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA). A Flood Risk Assessment will be aligned with the SEA process.

3.5.2 National Level

■ National: The National Spatial Strategy 2002–2020 (NSS)

The National Spatial Strategy (NSS) sets out a 20-year framework for balanced regional development across Ireland between 2002 and 2020. The Strategy recognises the key role that Dublin plays as an economic driver of the national economy and on the international stage. In order to sustain this role as the engine of the economy, it advocates the physical consolidation of Dublin. Dublin is recognised as a gateway under the National Spatial Strategy, which have a strategic location, nationally and relative to their surrounding areas, and

provide national scale social, economic infrastructure and support services. Further development of these gateways is a key component of the NSS. The NSS supports Dublin's pivotal role in national economic success, it is essential for balanced regional development that the performance of the GDA be built upon and physically consolidated.

■ **The National Development Plan (2007–2013 and Infrastructure and Capital Investment 2012–2016 Medium Term Exchequer Framework**

The National Development Plan 2007–2013 supported Transport 21, which ran until 2010, as a way to consolidate the city by integrating land use and transport. However, it should be noted that the more recent 'Infrastructure and Capital Investment Framework 2012–2016' had deferred certain large infrastructure projects such as Metro North, Metro West and Dart Underground. Other key national policies reaffirm the need for a compact city with consolidation achieved by increased densities of development along sustainable transport corridors and the optimisation of underutilised lands. There are also forthcoming changes in planning legislation to include new social housing requirements for developers, the introduction of a vacant site levy and 'Use it or Lose it' clauses with planning permissions.

■ **National Climate Change Strategy (2007–2012)/Climate Change Adaption Framework 2012**

The National Climate Change Strategy 2007–2012 sets out a range of measures, building on those already in place under the first National Climate Change Strategy (2000) to ensure Ireland reaches its target under the Kyoto Protocol. The Strategy provides a framework for action to reduce Ireland's greenhouse gas emissions.

The National Climate Change Adaptation Framework introduces an integrated policy framework, involving all stakeholders on all institutional levels to ensure adaptation measures are taken across different sectors and levels of government to manage and reduce Ireland's vulnerability to the negative impacts of climate change. Under the Framework, the relevant Government Departments, Agencies and local authorities have been asked to commence the preparation of sectoral and local adaptation plans and to publish drafts of these plans by mid-2014.

■ **National Policy Position on Climate Action and Low Carbon Development**

The National Policy Position, together with Climate Action and Low-Carbon Development Bill 2015, represents a major milestone in the Government Programme for the development of national climate policy and legislation which was announced in January 2012. The National Policy Position brings clarity and certainty to the national low-carbon transition objective for 2050, which is crucially important for planning and investment by Irish business, as well as attracting potential new investors both here in Ireland and from abroad. Both the National Policy Position and the Bill reaffirm Ireland's commitment to compliance with existing and future obligations of the State under EU and international law.

■ **National Renewable Energy Action Plan**

The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under European Renewable Energy Directive 2009/28/EC. The development of renewable energy is central to overall energy policy in Ireland. Nationally, the

Government’s ambitions for renewable energy and the related national targets are fully commensurate with the European Union’s energy policy objectives and the targets addressed to Ireland under the Renewable Energy Directive. Ireland’s energy efficiency ambitions (20% of energy from renewable sources by 2020) as set out in the National Energy Efficiency Action Plan are duly reflected in the NREAP.

■ **National Biodiversity Plan**

National Biodiversity Plan Action for Biodiversity 2011–2016: Ireland’s second National Biodiversity Plan sets out a vision for the conservation and restoration of biodiversity and ecosystems in Ireland and includes the overarching target of ‘reducing biodiversity loss and degradation of ecosystems in Ireland by 2016, and achieving substantial recovery by 2020’. The Plan sets out a number of strategic objectives and actions which are aimed at mainstreaming biodiversity in the decision making process across all sectors, strengthening the knowledge base and increasing awareness of biodiversity in order to support the achievement of the target.

■ **National Heritage Plan 2002**

The National Heritage Plan sets out a clear and coherent strategy and framework for the protection and enhancement of Ireland’s national heritage. The core objective of the Plan is to protect the national heritage as well as promoting it as a resource to be enjoyed by all.

■ **Our Sustainable Future – A framework for Sustainable Development in Ireland (2012):**

This framework recognises that the green economy and sustainable development agendas are a key element of Ireland’s economic recovery strategy and sets out the range of environmental, economic

and social measures required to move these agendas forward. The framework sets out 70 measures that will ensure we improve our quality of life for current and future generations and sets out clear measures, responsibilities and timelines in an implementation plan. These include areas such as the sustainability of public finances and economic resilience, natural resources, agriculture, climate change, transport, sustainable communities and spatial planning, public health, education, innovation and research, skills and training, and global poverty. The framework recognises that some aspects of the pattern of development that emerged in Ireland over the last decade present major challenges from a sustainable development perspective and spatial planning is one of the mechanisms, along with wider public policy co-ordination and fiscal policy, to effect change at national, regional and local level and deliver more sustainable communities.

■ **National Action Plan for Social Inclusion 2007–2016**

This National Action Plan for Social inclusion, complemented by the social inclusion elements of the National Development Plan 2007–2013: Transforming Ireland – A Better Quality of Life for All, sets out how the social inclusion strategy will be achieved over the period 2007–2016. The overall goal of this Plan is to reduce the number of those experiencing consistent poverty to between 2% and 0% by 2012, with the aim of eliminating consistent poverty by 2016.

■ **Smarter Travel – A Sustainable Transport Future 2009–2020**

The Government set out its vision for sustainability in transport in 2009, with five key goals and defined targets for the period 2009–2020. Goals included the general desire to reduce travel demand, cut

emissions and reliance on fossil fuels, and improve accessibility to transport. Targets set out were more specific and included the following:

- Future population and employment to take place in sustainable compact forms.
- Total share of car commuting to drop from 65% to 45%.
- Walking, cycling and public transport modes to rise to 55% of total commuter journeys to work.
- Total kilometers travelled by cars in 2020 not to be above (the then) current levels.

The overall focus was on an integrated delivery of the policy.

■ **Grid 25 Development Strategy**

EirGrid is a state-owned company and is the independent electricity Transmission System Operator (TSO) in Ireland and the Market Operator (MO) of the wholesale electricity trading system. EirGrid is responsible for the Grid infrastructure required to support the development of Ireland's economy, as well as connecting the Irish Grid to the European Grid. EirGrid plays a key role in the operation of the Single Electricity Market (SEM) which services the island of Ireland.

EirGrid's Grid25 Development Strategy provides an outline design of how the transmission network will be developed in the long-term to meet the challenges ahead. The Grid25 strategy thereby seeks to implement the provisions of the 2007 Government White Paper on Energy – 'Delivering a Sustainable Energy Future for Ireland' in terms of development of electricity transmission infrastructure. The Grid25 Implementation Programme is a practical strategic

overview of how the early stages of Grid25 are intended to be implemented.

■ **Water Services Strategic Plan – A Plan for the Future of Water Services (2015)**

From 1 January 2014 Irish Water became responsible for all public water services, involving the supply of drinking water and the collection, treatment and disposal of wastewater. The Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term. The plan will be reviewed on at least a five-yearly basis to ensure that it continues to be up to date with current and future needs.

■ **National Catchment Flood Risk Assessment and Management Programme**

The National CFRAM Programme was developed to prepare Flood Maps and Flood Risk Management Plans, focusing on areas where the risk is understood to be most significant such as cities, other urban areas, social areas and environmental protection areas. These areas of focus (Areas of Further Assessment / AFA) are identified through the Preliminary Flood Risk Assessment (PFRA).

The CFRAM Studies are scheduled to produce detailed Flood Maps for the AFAs in Q3 2015; and Flood Risk Management Plans in 2016 that will set out a long-term strategy and defined and prioritised measures, to reduce and manage the flood risk where possible. These CFRAM Plans will be reviewed every six years or following a major flooding event.

Implementation of the requirements the EU Floods Directive is co-ordinated with the requirements of the EU Water Framework Directive and the current River Basin Management Plans.

■ **Draft National Mitigation Plan (NMP)**

In line with National Policy Position on climate action and low carbon development, as well as the statutory provisions of the Climate Action and Low Carbon Bill 2015, a national low-carbon transition and mitigation plan to 2050, which will be referred to as the National Mitigation Plan of NMP, is currently being developed. A primary objective of the NMP will be to bring a clear focus to both the challenges and the opportunities of transitioning to a low carbon future. It will also track the implementation of steps already underway and identify additional measures in the longer-term to ensure that Ireland does its part in contributing to both EU and Global objectives in addressing the challenges ahead.

3.5.3 Regional Level

■ **The Regional Planning Guidelines for the Greater Dublin Area 2010–2022 (RPGs)**

The RPGs translate the national strategy to the regional level with a similar emphasis on Dublin as the driver of national development and the need to physically consolidate the growth of the Metropolitan Area and the proper integration of land use and transportation to promote more sustainable forms of development across the region. The RPG's published its population projections in June 2010, which suggests that the GDA will grow significantly through both natural increase and continued immigration. Up to 118,000 new houses could be needed across the seven GDA Local Authorities by 2022 to cater for the demand

generated by a combination of population increase and household composition. These population projects were prepared prior to the census in 2011. It should also be noted that the GDA Regional Authority will be replaced this year by the new Eastern and Midlands Regional Assembly which will result in the existing RPGs being replaced. The timing of both these changes provides some logistical difficulties for the preparation of the Development Plan and the Plan should be guided by and consistent with up-to-date National and Regional guidance.

■ **Waste Management Plans**

In accordance with Section 22 of the Waste Management Act, 1996 and the Waste Management (Planning) Regulations, 1997, notice was given of the intention to commence the preparation of new Regional Waste Management Plans in 2013. There will be three new Plans prepared for the following new waste management planning regions:

- Connacht-Ulster;
- Eastern-Midland (comprising local authorities: Dún Laoghaire-Rathdown, Dublin City, Fingal, Kildare, Laois, Longford, Louth, Meath, Offaly, South Dublin, Wicklow and Westmeath); and
- Southern.

The Eastern-Midlands Waste Management Plan 2015–2021 covers the four Dublin Local Authorities as well as Wicklow, Kildare, Laois, Offaly, Westmeath, Longford, Meath and Louth. Under the plan, any new waste treatment facility or policy will have to be planned and co-ordinated at regional level through the new eastern midlands waste office based in Dublin City Council. The plan contains over 60 measures designed to prevent waste being generated or to deal with waste in a more sustainable manner.

■ **Eastern River Basin Management Plans**

Local Authorities, including Dublin City Council, have prepared a River Basin Management Plan and Programme of Measures for the Eastern River Basin District (ERBD) 2009-2015 which is implemented in order to help protect and improve waters in the city and wider River Basin Districts.

The ERBD Management Plans and associated Programmes of Measures include provisions to help ensure that water bodies in the district meet the objectives of the Water Framework Directive. The Plan identifies the status of water bodies within the RBD and provides objectives in order to implement the requirements of the Water Framework Directive. In 2015 a second River Basin Management Plan was published outlining the status of the ERBD and measures for future management.

3.5.4 Local Policy

Dublin City Biodiversity Action Plan 2008–2012

The current Dublin City Biodiversity Action Plan (BAP), which is currently being updated, identifies a number of priority species and habitats to be protected in the city such as: red squirrel, otter, bats, salmonids, various insects, birds, wetlands, and semi-natural grasslands. Some of these are already protected by legislation but for those that are not, they will be given conservation priority within DCC and projects. In the BAP the major threats to global biodiversity were identified as being:

- Loss of extent – removing an area of habitat, i.e. rainforest, garden or park, results in a direct loss. Buildings and bridges provide habitats for bats in particular, and their removal

or replacement can also have direct impacts on the city’s bats biodiversity

- Habitat Fragmentation – Breaking up of large areas into isolated smaller parts reduces the ability of animals to move from a threat and reduces food and cover
- Invasive species – plants and animals that arrive from elsewhere and quickly take over spaces that are usually occupied by native species poses a huge threat.

Dublin City Heritage Plan 2002–2006

The Dublin City Heritage Plan, which has not been updated, sets out priorities to identify, protect, preserve, enhance and increase awareness of Dublin’s heritage in the area of the historic built environment, the natural environment and the social and cultural history of the city. The City Heritage Plan is a realistic and achievable five-year action plan dealing with citywide issues rather than local projects. It is a concerted effort to recognise problem areas for our shared heritage and, through a partnership approach, implement measures over the next five years that will:

- improve our heritage information base
- enhance communication between all stake holders
- raise heritage awareness
- put in place best practice
- implement key projects.

Dublin City Development Plan 2011–2017

The Dublin City Development Plan 2011–2017 provides for a coherent spatial framework for the delivery of sustainable development to ensure an improved quality of life for its citizens. The vision for Dublin set out in the current Development Plan

was that ‘within the next 25 to 30 years, Dublin will have an established international reputation as one of the most sustainable, dynamic and resourceful city regions in Europe. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbours, all connected by an exemplary public transport, cycling and walking system and interwoven with a quality bio-diverse green space network. In short, the vision is for a capital city where people will seek to live, work and experience as a matter of choice’. The Core Strategy of the Development Plan set out to achieve the vision in a manner that is consistent with the guidance, strategies and policies at national, and regional level, in particular the National Spatial Strategy 2002–2020 (NSS), the Regional Planning guidelines for the Greater Dublin Area 2010–2022(RPGs) and the government’s Smarter Travel – A Sustainable Transport Future 2009–2020, all guide and direct the city councils housing, settlement and retail strategies.

Other Lower Tier Land Use Plans:

Taking account of the higher level policy development framework, the medium to long-term vision for Dublin will be set out in an evidence based ‘core strategy’. The Development Plan incorporates the RPGs into a settlement hierarchy to focus investment and growth into strategic locations.

To deliver the core strategy a number of mechanisms will be employed.

Dublin City Council will prepare area specific guidance for the Strategic Development seven Regeneration areas (SDRAs) and key district centres (KDCs),

using the appropriate mechanisms of local areas plans (LAPs) and schematic master plans and local environmental improvement plans (LEIPs).

List of Key District Centres

Key District (KDCs)

1. Clongriffin and Belmayne (North Fringe East & west)
2. Northside
3. Ballymun
4. Finglas
5. Ballyfermot
6. Naas Road
7. Rathmines
8. Phibsborough

List of Strategic Development Regeneration Areas

- SDRA 1 North Fringe (Clongriffin-Belmayne)
- SDRA 2 Ballymun
- SDRA 3 Ashtown-Pelletstown
- SDRA 4 Park West/Cherry Orchard
- SDRA 5 Naas Road
- SDRA 6 Docklands (SDZ and Wider Docklands Area)
- SDRA 7 Heuston & Environs
- SDRA 8 Grangegorman/Broadstone
- SDRA 9 Saint Michael’s Estate(including adjoining Keogh Barracks/Richmond Barracks)
- SDRA 10 Dominick Street
- SDRA 11 Stoneybatter, Manor Street & O’Devaney Gardens
- SDRA 12 St. Teresa’s Gardens and Environs
- SDRA 13 Dolphins House
- SDRA 14 Croke Villas and Environs

- SDRA 15 St.James’ Hospital Campus and Environs
 - SDRA 16 Liberties and Newmarket Square
 - SDRA 17 Oscar Traynor Road
 - SDRA 18 National Concert Hall Quarter
- Schedule of proposed Statutory Local Area Plans/Strategic Development Zones to deliver the core strategy:
- Ballymun LAP
 - Harold’s Cross LAP
 - Moore Street and Environs LAP
 - Park West/Cherry Orchard LAP
 - Phibsborough LAP
 - Poolbeg West SDZ
 - Stoneybatter, Manor Street and O’Devaney Gardens LAP

Table 3.3: Relationship of the Development Plan with other Plans and Programmes

Plan / Programme	
European Policy Level	Relevant Legislation in Ireland
EU Habitats Directive 92/43/EEC	European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) The Wildlife Acts 1976–2012 The Flora Protection Order in force is the Flora (Protection) Order, 2015, S.I No. 356 of 2015 The European Communities (Natural Habitats) Regulations 1997 have been revoked
EU Birds Directive 79/409/EEC	The European Communities (Birds and Natural Habitats) Regulations 2011, S.I No 477 of 2011; The European Communities *Birds and Natural Habitat)(Amendment) Regulations 2013, S.I No. 499 of 2014 and The European Communities (Birds and Natural Habitats)(Amendment) Regulations 2015, S.I No. 355 of 2015-12-15. These can be called together as the European Communities (Birds and Natural Habitats Regulations 2011 to 2015)
EU SEA Directive (2001/42/EC)	European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435/ 2004) (as amended) Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I.No. 436/2004) (as amended)
EU Waste Framework Directive 20098/98/EC)	European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003) (as amended)

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Plan / Programme	
The Environmental Impact Assessment Directive (2014/52/EU) (The initial Directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 13 December 2011. Directive 2011/92/EU has been amended in 2014 by DIRECTIVE 2014/52/EU)	S.I. 349 of 1989 EC (Environmental Impact Assessment Regulations) 1989 and amendments
The Urban Wastewater Treatment Directive (91/271/EEC)	S.I. 254 of 2001 Urban Waste Water Treatment Regulations, 2001 and 2004, SI 48 of 2010
EU Water Framework Directive (2000/60/EC)	European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003) (as amended)
The Drinking Water Directive (98/83/EC) (80/778/EEC repealed 25/12/2003)	SI 122 of 2014 – European Union (Drinking Water) Regulations 2014 S.I. 278 of 2007 EC (Drinking Water Regulations) (No 2) S.I. No. 439 of 2000 European Communities (Drinking Water) Regulations 2000
EU Bathing Water Directive 2006/7/EC	SI 351 of 2011 – Bathing Water Quality (Amendment) Regulations S.I. 79 of 2008 – Bathing Water Quality Regulations, 2008
The Plant Protection Products Directive (91/414/EEC)	S.I. 83 of 2003 EC (Authorisation, Placing on the market, use and control of Plant Protection Products) Regulations, 2003 and amendments S.I. 224 of 2005 and S.I. 381 of 2006 S.I. 624 of 2001 EC (Classification Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations, 2001 S.I. 320 of 1981 EC (Prohibition of certain active substances in plant protection products) S.I 565 of 2008 EC (Pesticides Residues) Regulations 2008
EU Shellfish Waters Directive 2006/113/EC	The Directive is implemented in Ireland by the European Communities (Quality of Shellfish Waters) Regulations 2006 (SI No 268 of 2006). Pollution reduction programmes (PRPs) were established for 14 sites already designated under the these Regulations
EU Freshwater Fish Directive 2006/44/EC	Directive 2006/44/EC of the European Parliament and of the Council of 6 September 2006 on the quality of fresh waters needing protection or improvement in order to support fish life (The Fish Directive (consolidated))
EU Marine Strategy Framework Directive 2008/56/EC	European Communities (Marine Strategy Framework) Regulations 2011 (S.I. No. 249/2011)

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Plan / Programme	
EU Floods Directive 2007/60/EC	European Communities (Assessment and Management of Flood Risks) Regulations (S.I.122/2010) European Union (Environmental Impact Assessment) (Flood Risk) Regulations 2012 (S.I.No. 470/2012)
EU Control of Major Accidents Directive 96/82/EC as amended by Directive 2003/105/EC is also known as the Seveso II Directive.	The Directive was implemented in Ireland as the S.I. No. 74/2006 – European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2006
The Sewage Sludge Directive (86/278/EEC)	Waste Management (Use of Sewage Sludge in Agriculture) (Amendment) Regulations 2001 (S.I. No. 267 of 2001) S.I. 148 of 1998 Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998–2001
Directive on Ambient Air Quality and Cleaner Air for Europe (Directive 2008/50/EC). It replaced the Framework Directive and the first, second and third Daughter Directives. The fourth Daughter Directive (2004/107/EC) will be included in CAFE at a later stage. The limit and target values for both Directives are outlined below	The CAFE Directive was transposed into Irish legislation by the Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011). It replaces the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004) and S.I. No. 33 of 1999 The fourth Daughter Directive was transposed into Irish legislation by the Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. No. 58 of 2009)
EU Energy Efficiency Directive 2012/27/EU Directive 2012/27/EU of the European Parliament of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC	The Energy Efficiency Directive (2012/27/EU) introduces binding measures to ensure the target of increasing energy efficiency by 20% by 2020 can be achieved. This target is part of the EU's wider 2020 energy and climate goals, including a 20% reduction in greenhouse gas emissions and a 20% share in renewables in the EU energy mix
EU European Renewables Directive 2009/28/EC	European Communities (Renewable Energy) Regulations 2011 (S.I. No. 147/2011)
EU Energy Performance of Buildings Directive 2010/31/EU	The EU Energy Performance of Buildings Directive (EPBD), transposed into Irish Law from 2006 onwards, contains a range of provisions to improve the energy performance of new and existing buildings. The EPBD obliges specific forms of information and advice on energy performance to be provided to building purchasers, tenants and users for consideration in property transactions. From 2013, the EPBD was superseded by the Recast EPBD and S.I. No 666 of 2006 was superseded by S.I. 243 of 2012. The following documents provide further details on the EPBD, the Recast EPBD, implementation in Ireland and other EU Member States

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Plan / Programme	
EU Directive 2008/50/EC on ambient air quality, this Directive replaces Council Directive 96/62/EC on ambient air quality assessment and management, Council Directive 1999/30 EC relating to limits for sulphur dioxide, nitrogen dioxide, oxides of nitrogen, particulate matter and lead in ambient air, Council Directive 2000/69/EC relating to limit values for benzene and carbon monoxide in ambient air and Council Directive 2002/3/EC relating to ozone in ambient air)	Air Quality Standards Regulations 2011 S.I. No. 180 of 2011
EU Groundwater Directive 2006/118/EC	European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No.9/2010) (as amended)
Soil Framework Directive (proposed)	Member states to adopt a systematic approach to identifying and combating soil degradation
EU Nitrates Directive (91/676/EEC)	SI 31 of 2014 – European Union (Good Agricultural Practice for Protection of Waters) Regulations 2014 S.I. 378 of 2006 EC Good Agricultural Practice for Protection of Waters Regulations, 2009
European Commission White Paper on Adapting to climate change: Towards a European Framework for Action (COM (2009) 147)	Sets out a framework to reduce the EU's vulnerability to the impact of climate change
European Union Biodiversity Strategy to 2020	Actions for Biodiversity 2011–2016 Ireland's National Biodiversity Plan, 2011
A Blueprint to Safeguard Europe's Water Resources	European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003) (as amended)
Biocidal Products Regulation (528/2012) as amended (334/2014)	S.I. No. 427 of 2013 European Union (Biocidal Products) Regulations 2013 (as amended)
Environmental Quality Standards Directive (Directive 2008/105/EC) (also known as the Priority Substances Directive) as amended by Directive 2013/39/EU)	European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I.No. 272/2009) European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003)
EU Environmental Noise Directive 2002/49/EC	Environmental Noise Regulations 2006 (S.I. 140 of 2006)

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

National Level	
National Spatial Strategy 2002-2020 – People Places Potential (2002)	The National Spatial Strategy (NSS) is a 20-year National framework that sets out a strategy for balanced regional development across Ireland and it informs National decisions as to where development (and Government investment) should take place. The NSS, while acknowledging the Greater Dublin Area (GDA) as the driver of the national economy, seeks to promote a better balance of population, jobs and development elsewhere in the State. The NSS is now 12 years old and is currently under review by the Department of Communications, Climate Action and Environment and Local Government and may be replaced either during the County Development Plan process or shortly thereafter
National Development Plan 2007–2013	€184 mil infrastructural investment plan to build a prosperous country for Ireland’s population
Infrastructure and Capital Investment 2012–2016: Medium-Term Exchequer Framework (2011)	The Infrastructure and Capital Investment Plan succeeded the National Development Plan which ran from 2007–2010. This Plan was formulated – at a time of tight fiscal constraints – to assess the capacity of Ireland’s infrastructure and identify remaining gaps which needed to be addressed to aid economic recovery, social cohesion and environmental sustainability
Smarter Travel – A Sustainable Transport Future (2009)	‘Smarter Travel’ is the Government’s Action Plan to free towns and cities from traffic congestion, substantially cut CO ₂ emissions and encourage car-based commuters to leave their cars at home. This Plan sets out 49 individual actions to encourage a shift toward walking, cycling and greater public transport usage
National Cycle Policy Framework 2009–2020	Ireland’s first Cycle Policy Framework sets out the Governments action plan to achieve the goal of creating an embedded culture of cycling within both urban and rural areas
Construction 2020 – A Strategy for a Renewed Construction Sector (2014)	This Strategy sets out a focused programme of action to deliver a strong, sustainable, well-financed, competitive and innovative approach to construction and housing, building to the highest standards, at realistic levels and with consumer protection at its heart
Irish Water Proposed Capital Investment Plan 2014–2016	The Capital Investment Plan outlines Irish Waters indicative short-term investment priorities in water services infrastructure. The Capital Investment Plan aims to deliver improvements in drinking water quality, leakage, wastewater compliance, business efficiencies and customer service
Our Sustainable Future: A Framework for Sustainable Development in Ireland 2012	Sets out a medium to long-term framework for advancing sustainable development and the green economy in Ireland. Our Sustainable Future takes account of developments at international and EU level designed to deliver an effective transition to an innovative, low carbon and resource efficient future

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

National Level	
Social Housing Strategy 2020, Support, Supply and Reform	The vision outlined in the Strategy is that every household will have access to secure, good quality housing suited to their needs at an affordable price in a sustainable community and that the State, for its part, will put in place financially sustainable mechanisms to meet current and future demand for social housing supports, ensuring value for money for taxpayers while respecting the preferences of individual households to the greatest extent possible. This six-year Social Housing Strategy sets out to fully meet our obligations to those who need assistance to provide a home for themselves. It makes a fresh start. It lays down a firm foundation for a carefully calibrated, multi-annual investment programme that seeks to break through the electoral cycle and to prioritise the provision of social housing out to the year 2020
National Heritage Plan (2002)	The purpose of the National Heritage Plan is to set out a clear and coherent strategy and framework for the protection and enhancement of our heritage over the next five years
Actions for Biodiversity, 2011–2016 – Ireland’s National Biodiversity Plan	Actions for Biodiversity 2011-2016 builds upon the achievements since 2002. It focuses on actions that were not fully completed and addresses emerging issues. The measures Ireland will take in the overall strategy of, Actions for Biodiversity 2011–2016 are set out in a series of Strategic Objectives
Towards a Resource Efficient Ireland – A National Strategy to 2020, incorporating Irelands National Waste Prevention Programme	Since its inception in 2004, Ireland’s National Waste Prevention Programme has successfully delivered solutions for individuals and organisations that recognise the costs of wasteful consumption (both excess purchasing and final disposal charges); along with the critical need to manage our finite natural resources to maintain our quality of life into the future. Over the years the programme has evolved beyond an initial focus on preventing generation of solid wastes to a broader view of preventing wastage across materials, energy and water (primarily because of the integrated nature of relationships between each). The title of this document, the fourth iteration of the programme, is intended to reflect this broad approach and to highlight the key role for the programme in delivering on national priorities on competitiveness and green growth. It sets out the programme aims for the period to 2020
National Hazardous Waste Management Plan, 2014–2020 (2014)	This revised National Hazardous Waste Management Plan is prepared by the Environmental Protection Agency in accordance with Section 26 of the Waste Management Act 1996 as amended. The first such Plan was published in 2001 and was replaced by a second Plan published in 2008. This third Plan is a revision of the second Plan and will cover a period of six years from the date of publication 2014–2020.

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

National Level	
Putting People First – Action Programme for Effective Local Government (2012)	This Action Programme, Putting People First, outlines Government policy for reform and development right across the local government system. The reforms put a strong emphasis on accountability as the bedrock of a properly functioning system of local democracy, providing for better engagement with citizens
The National Action Plan for Social Inclusion 2007-2016 (2007)	While the Plan identifies a wide range of targets and interventions, the Government has also identified a number of high level strategic goals in certain key priority areas in order to achieve the overall objective of reducing consistent poverty. These targeted actions and interventions are designed to mobilise resources to address longstanding and serious social deficits. Both this Plan and the National Development Plan 2007–2013 Transforming Ireland – A Better Quality of Life for All highlight these high level goals which are aimed at making a decisive impact on poverty
Buildings for Everyone: A Universal Approach (2012)	Provides comprehensive best practice guidance on how to design, build and manage buildings and spaces so that they can be readily accessed and used by everyone, regardless of age, size, ability or disability
National Climate Change Strategy 2007–2012	This National Climate Change Strategy 2007–2012 builds on the commitment to sustainable development set out in Towards 2016 and the National Development Plan 2007–2013 and is one of a number of interrelated Government initiatives that will address energy and climate change issues. These include the White Paper on Energy, the Bio-Energy Action Plan and the forthcoming Sustainable Transport Action Plan. Taken together, these measures will support environmental sustainability, underpin our competitive position and enable us to meet our global responsibilities
National Climate Change Adaptation Framework – Building Resilience to Climate Change (2012)	This National Climate Change Adaptation Framework provides the policy context for a strategic national adaptation response to climate change in Ireland and is designed to evolve over time as planning and implementation progresses, and as further evidence becomes available
Ireland and the Climate Change Challenge – Connecting How Much with How To (2012)	This report sets out the NESC Secretariat’s vision for Ireland in 2050, and the key building blocks that can underpin it. It outlines a way of thinking about the challenges of climate-change policy and the global resource crunch and proposals for a pragmatic approach involving simultaneous action along three tracks.

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

National Level	
Towards nearly Zero Energy Buildings in Ireland – Planning for 2020 and Beyond (2012)	Arising from the Recast of the European Performance of Buildings Directive, from 1 January 2019 every new public building will have to be designed to nearly zero energy building standards. Also, all other new buildings will have to comply with the new nearly zero energy buildings standards from 1 January 2021. The Irish standards for Nearly Zero Energy Buildings are set out in the Department of the Environment, Community and Local Government's (DCELG) publication Towards Nearly Zero Energy Buildings in Ireland – Planning for 2020 and Beyond, issued in November 2012
National Energy Efficiency Action Plan 3 (NEEAP) (2009)	The NEEAP sets a clear vision for each of the sectors covered by the Action Plan, around which public and private sector actors can mobilise. The Department has reviewed, updated and replaced certain actions from the first Plan as appropriate to ensure we remain on track to meet our national and EU targets.
National Disability Strategy Implementation Plan 2013–2015	The National Disability Strategy is a whole-of-Government approach to advancing the social inclusion of people with disabilities. This Implementation Plan sets out the practical measures that will be taken to advance the National Disability Strategy over the period 2013 to 2015.
Sustainable Residential Development in Urban Areas – Guidelines for Planning Authorities 2009	Objective to produce high quality sustainable development which includes the integration of schools, community facilities, employment, transport and amenities in a timely and cost-effective manner
Urban Design Manual – A Best Practice Approach	Companion document on best practice implementation of 'Sustainable Residential Development in Urban Areas'
Preventing and Recycling Waste: Delivering Change (2002)	Aims to achieve an integrated approach to waste management based on the internationally accepted hierarchy of options with waste prevention favoured
A Strategy for Public Libraries 2013–2017 (2013)	This five-year strategy sets out an ambitious approach for the future of the public library service in Ireland. In line with national and local government policy, the strategy proposes innovative measures to manage existing resources more efficiently in order to continue to develop and deliver a library service which meets the information, learning and cultural needs of individuals and communities and, in so doing, it will contribute to economic recovery and social and cultural improvement

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

National Level	
A National Landscape Strategy for Ireland 2015–2025	The National Landscape Strategy is Ireland’s way of meeting our obligations and delivering on the objectives under the European Landscape Convention. Its implementation can also assist Ireland in complying with United Nations, EU and national targets to foster sustainable development along with the implementation of Our Sustainable Future, a Framework for Sustainable Development for Ireland (2012), the National Climate Change Adaptation Framework (2012), the National Biodiversity Action Plan 2011–2016 (2011) and the Government Policy on Architecture 2009–2015 (2009)
Draft National Mitigation Plan (NMP)	In line with National Policy Position on climate action and low carbon development, as well as the statutory provisions of the Climate Action and Low Carbon Bill 2015, a national low-carbon transition and mitigation plan to 2050, which will be referred to as the National Mitigation Plan of NMP is currently being developed. A primary objective of the NMP will be to bring a clear focus to both the challenges and the opportunities of transitioning to a low carbon future. It will also track the implementation of steps already underway and identify additional measures in the longer-term to ensure that Ireland does its part in contributing to both EU and Global objectives in addressing the challenges ahead.
Waterways Heritage Plan 2016–2020	The Waterways Heritage Plan 2016–2020 provides, for the first time, a strategic framework for the integration of built, natural and cultural heritage into the future management of our waterways.

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Regional Level	
Regional Planning Guidelines for the Greater Dublin Area 2010–2022	The RPGs provide an overall spatial policy framework for the GDA to 2022 and focus primarily on <ul style="list-style-type: none"> i. the physical consolidation of the Dublin Metropolitan Area and ii. the proper integration of land use and transportation to promote more sustainable forms iii. of development across the Region
Retail Strategy for the Greater Dublin Area (GDA) 2008–2016	Aims to set out a co-ordinated, sustainable approach to the assessment and provision of retail within the Greater Dublin Area
Greater Dublin Strategic Drainage Study (2005)	Identifies the policies, strategies and projects for developing a sustainable drainage system for the Greater Dublin Region; Identifies the need for the North Dublin Wastewater Treatment Plan and the Orbital Sewer, improvements in the drainage capacity and the need to upgrade existing treatment plants to their ultimate capacity
Dublin Coastal Flooding Protection Project	Aims to address and assess the risk from tidal flooding around the coastline
Waste Management Plan for the Dublin Region 2005–2010 (2005)	Provides a framework for minimising waste, encouraging recycling and ensuring the avoidance of environmental pollution. Policy also includes diversion from landfill in accordance with targets set out in the European Union Landfill Directive
DTO Strategy 2000–2016 – A Platform for Change	Integrated, multi-modal transportation strategy for the Greater Dublin Area
Greater Dublin Area Draft Transport Strategy 2011–2030 ‘2030 Vision’	The draft Transport Strategy for the GDA was produced by the National Transport Authority for the period 2011 to 2030. The Strategy sets out policies and measures required to support the GDA in realising its full potential

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Regional Level	
Integrated Implementation Plan 2013–2018	<p>The National Transport Authority produced an Integrated Implementation Plan which sets out a central Infrastructure Investment Programme for the GDA Region over the period 2013 to 2019. The Plan envisages a total investment of €884 million over six years, with four key investment areas:</p> <ul style="list-style-type: none"> • Light rail €306 million • Bus €245.6 million • Integrated measures and sustainable transport €192.9 million • Heavy Rail €140 million
Air Quality management Plan for the Dublin Region 2005–2010 (2005)	
Dublin Agglomeration Environmental Noise Action Plan 2013–2018 (2013)	<p>This Dublin Agglomeration Noise Action Plan 2013–2018 has been prepared jointly by the four Local Authorities in the Dublin Agglomeration. The key objective is to avoid, prevent and reduce, where necessary, on a prioritised basis the harmful effects, including annoyance, due to long term exposure to environmental noise from road traffic, rail and aircraft. This will be achieved by taking a strategic approach to managing environmental noise and undertaking a balanced approach in the context of sustainable development</p>
Eastern River Basin District – River Basin Management Plan 2008 and Associated Programme of Measures (POM)	<p>Describes the actions that are proposed to ensure the necessary protection of waters in the Eastern River Basin District</p>
Water Supply Project Dublin Region	<p>Study determining a new major water source to meet projected demand in the long term</p>
Greater Dublin Water Supply Strategic Study 1996–2016	
Eastern River Basin District Management Plan 2009–2015 and Associated Programmes of Measures (2010)	<p>Describes the actions that are proposed to ensure the necessary protection of waters in the Eastern River Basin District</p>
Catchment-Wide Flood Risk Assessments	<p>Requirement of the EU Floods Directive</p>
Greater Dublin Area Cycle Network Plan (2013)	<p>The main objective for this plan stems from the National Cycle Policy Framework’s commitment to ensuring that 10% of all journeys by 2020 will be by bicycle. This follows a concerted attempt by all government bodies and organisations to ensure that cycling as a transport mode is supported, enhanced and exploited, in order to achieve strategic objectives and reach national goals</p>
Planning and Development of Large-Scale, Rail Focused Residential Areas in Dublin (2013)	

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Local Level	
Dublin Docklands Master Plan 2008	Key objective to secure the sustainable social and economic regeneration of the area, with improvements to the physical environmental being a vital ingredient
Dublin City Council Biodiversity Action Plan 2008–2012 (currently being updated)	Aims to achieve the objectives of the Dublin City Development Plan relating to quality of life, green spaces, amenity provision, planning development and protection of the natural heritage in the city as well as working towards the world target the ‘achievement by 2010 of a significant reduction in the current loss of biological biodiversity’
Green City Guidelines – Advice for the Protection and Enhancement of Biodiversity in Medium to High-Density Urban Developments 2008	Provides practical guidance to planners and developers on how to integrate biodiversity into new developments, specifically medium to high density housing developments in urban areas
Climate Change Strategy for Dublin City 2008–2012	Focuses on the continuation of the implementation of a range of measures across key areas involving a cross-cutting approach and includes targets in energy, planning, transport, waste management
Action Plan on Energy for Dublin 2008	Key objective to improve quality of life in Dublin and to reduce Dublin’s carbon footprint in the context of the global problem of climate change
Cultural Strategy for Dublin City 2009	Aims to fulfil the vision ‘Culture is integral to Dublin city’s identity and quality of life’
Dublin City Heritage Plan 2002–2006	Sets out priorities to identify, protect, preserve, enhance and increase awareness of Dublin’s heritage in the area of the historic built environment, the natural environment and the social and cultural history of the city. This has not been updated
Dublin City Sustainable Energy Action Plan 2010–2020 (2010)	The Dublin City Sustainable Energy Action Plan 2010–2020 analyses the city’s current energy use and carbon dioxide emissions and sets out how the city can reduce its energy consumption through greater efficiency in areas such as residential and commercial buildings, services, industry and transport, along with increasing our share of renewable energy

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Local Level	
Climate Change Strategy for Dublin City (2012)	The Climate Change Strategy for Dublin City is in accordance with the National Climate Change Strategy and with other agencies and State Departments. Close co-operation with all the local authorities in the Dublin Region is envisaged. The strategy will cover the years 2008–2012 in the short-term, but also takes into account a medium-term view to 2020 and beyond. Once each year the strategy will be reviewed and updated
Dublin City Council's Guidelines for Open Space and Development Taking in Charge (2009)	Guidelines issued by Dublin City Council which include required measures
Habitat Management Plans	Management Plans produced for five parks – Springdale Park, St Kevin's Park, St Anne's Park, Le Fanu Park and Bushy Park – are being implemented by Dublin City Council Parks and Landscape Services
Water Supply Project Dublin Region – (2010)	Under the 2002–2004 Water Services Investment Programme (WSIP)*, Dublin City Council (DCC) were appointed by the Department of Environment Heritage and Local Government (DEHLG) in 2003 to undertake Feasibility Studies and prepare a Plan/Report for the purpose of identifying and recommending a preferred new major supply source to meet the long-term water supply needs of the Dublin Region (Water Supply Area)
Local Area Plans/SDZs – Dublin City Council <ul style="list-style-type: none"> • Naas Road Local Area Plan (2013) • Georges Quay Local Area Plan (2012) • Clongriffin – Belymane – North Fringe Local Area Plan (2012) • Pelletstown Local Area Plan (2014) • North Lotts Grand Canal Dock SDZ Planning Scheme (2013) • Grangegorman SDZ Planning Scheme (2012) • Liberties Local Area Plan 	<p>The function of a Local Area Plan is to take a detailed look at a specific area, identifying and analysing the various issues of relevance, before establishing and setting out principles for the future development of the area. These must set out objectives for the proper planning and sustainable development of a specific area. These objectives must be relevant to the local area and consistent with the provisions of the Dublin City Development Plan 2011–2017</p> <p>As a legal document, the Planning Authority (the Council) and An Bord Pleanála must take account of the provisions of the LAP when considering an application for planning permission for a development located within the area defined by a local plan</p>

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Local Level	
<p>Strategic Development and Regeneration Areas (SDRAs):</p> <ul style="list-style-type: none"> • SDRA 1 North Fringe (Clongriffin-Belmayne) • SDRA 2 Ballymun • SDRA 3 Ashtown-Pelletstown • SDRA 4 Park West/Cherry Orchard • SDRA 5 Naas Road • SDRA 6 Docklands (SDZ and Wider Docklands Area) • SDRA 7 Heuston & Environs • SDRA 8 Grangegorman/Broadstone • SDRA 9 Saint Michael’s Estate(including adjoining Keogh Barracks/Richmond Barracks) • SDRA 10 Dominick Street • SDRA 11 Stoneybatter, Manor Street & O’Devaney Gardens • SDRA 12 St. Teresa’s Gardens and Environs • SDRA 13 Dolphins House • SDRA 14 Croke Villas and Environs • SDRA 15 St.James’ Hospital Campus and Environs • SDRA 16 Liberties and Newmarket Square • SDRA 17 Oscar Traynor Road • SDRA 18 National Concert Hall Quarter 	<p>These are important brownfield sites with the potential to deliver a significant quantum of mixed-uses and create synergies to regenerate their respective areas. The Plan prioritises the renewal and regeneration of these areas by a series of guiding principles</p>

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes

Ministerial Guidelines – (not an exhaustive list)
National Landscape Strategy for Ireland 2014–2024 (2014)
Local Area Plans Guidelines for Local Authorities (2013) and Manual for Local Area Plans (2013)
Development Contributions Guidelines for Planning Authorities (2013)
Irish Design Manual for Urban Roads and Streets (2013)
Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2013)
Government Policy Statement on ‘Strategic Importance of Transmission and Other Energy Infrastructure’ (2012)
Spatial Planning and National Roads – Guidelines for Planning Authorities (2012)
A Resource Opportunity Waste Management Policy in Ireland (2012)
Retail Planning Guidelines for Planning Authorities (2012)
Retail Design Manual: Companion document for the Retail Planning Guidelines(2012)
Telecommunications Antennae and Support Structures Guidelines Circular Letter PL 07/12 (2012)
Section 261A of the Planning and Development and Related Provisions: Guidelines for Planning Authorities (2012)
Childcare Facilities – Guidelines for Planning Authorities (2011)
Architectural Heritage Protection – Guidelines for Planning Authorities (2011)
Draft Guidance for Planning Authorities on Drainage and Reclamation of Wetlands (2011)
National Cycle Manual (2011)
Implementation of Regional Planning Guidelines Best Practice Guidance (2010)
Appropriate Assessment of Plans and Projects in Ireland – Guidelines for Planning Authorities (2010)
Implementation of New EPA code of Practice on Wastewater Treatment and Disposal Systems serving Single Houses (Circular Letter PSSP 1/10 (2010)
Government Policy on Architecture 2009–2015: Towards a Sustainable Future: Delivering Quality within the Built Environment (2009)
The Planning System and Flood Risk Management Guidelines for Planning Authorities and Technical Appendices (2009)
Sustainable Residential Development in Urban Areas (2009)
Urban Design Manual Best Practice Guidelines (2009)
Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (2009)
The Provision of Schools and the Planning System (2008)
Taking in Charge of Residential Development Circular Letter PD 1/08 (2008)
Development Plans: Guidelines for Planning Authorities (2007)
Sustainable Urban Housing: Design Standards for New Apartments (2015)
Delivering Homes, Sustaining Communities (2007)
Quality Housing for Sustainable Communities (2007)

Table 3.3 (ctd): Relationship of the Development Plan with other Plans and Programmes**Ministerial Guidelines – (not an exhaustive list)**

Government White paper 'Delivering a Sustainable Energy Future for Ireland, Energy Policy Framework 2007–2020' (2007)
Bio-Energy Action Plan for Ireland (2007)
Wastewater Discharge (Authorisation) Regulations SI No. 684 of 2007 Circular PD 7/09 (2007)
National Childcare Strategy: A Guide for Providers 2006–2010 (2006)
Wind Energy – Development Guidelines for Planning Authorities (2006)
National Childcare Strategy: A Guide for Providers 2006–2010 (2006)
Taking in Charge Housing Estates/Management Companies PD 1/06 (2006)
Redevelopment of Certain Lands in the Dublin Area primarily for Affordable Housing – Guidelines for Planning Authorities (2006)
Sustainable Rural Housing Guidelines for Planning Authorities (2005)
Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment, Guidelines for Regional Authorities and Planning Authorities (2004)
Implementation of SEA Directive (2004)
'Ready Steady Play': A National Play Policy (2004)
Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-Threshold Development (2003)
Architectural Heritage Protection for Places of Public Worship: Guidelines for Planning Authorities (2003)
Framework and Principles for the protection of the Archaeological Heritage (1999)
Telecommunications Antennae and Support Structures – Guidelines for Planning Authorities (1996)
Tree Preservation – Guidelines for Planning Authorities (1994)

04

Baseline Environment

4.1 Introduction

This section of the Environmental Report examines the relevant significant issues of the current state of the environment within Dublin city in relation to biodiversity, fauna, flora, population and human health, water, climatic factors, cultural heritage, landscape and soil, material assets and the interrelationship between these factors. The baseline has been compiled using available datasets suggested during scoping. It has focused on mapping the relevant baseline information that relates to the policies and objectives contained within the Dublin City Development Plan.

4.1.1 State of the Environment Overview – Republic of Ireland

Ireland’s natural environment, although under increasing pressure, generally remains of good quality and represents

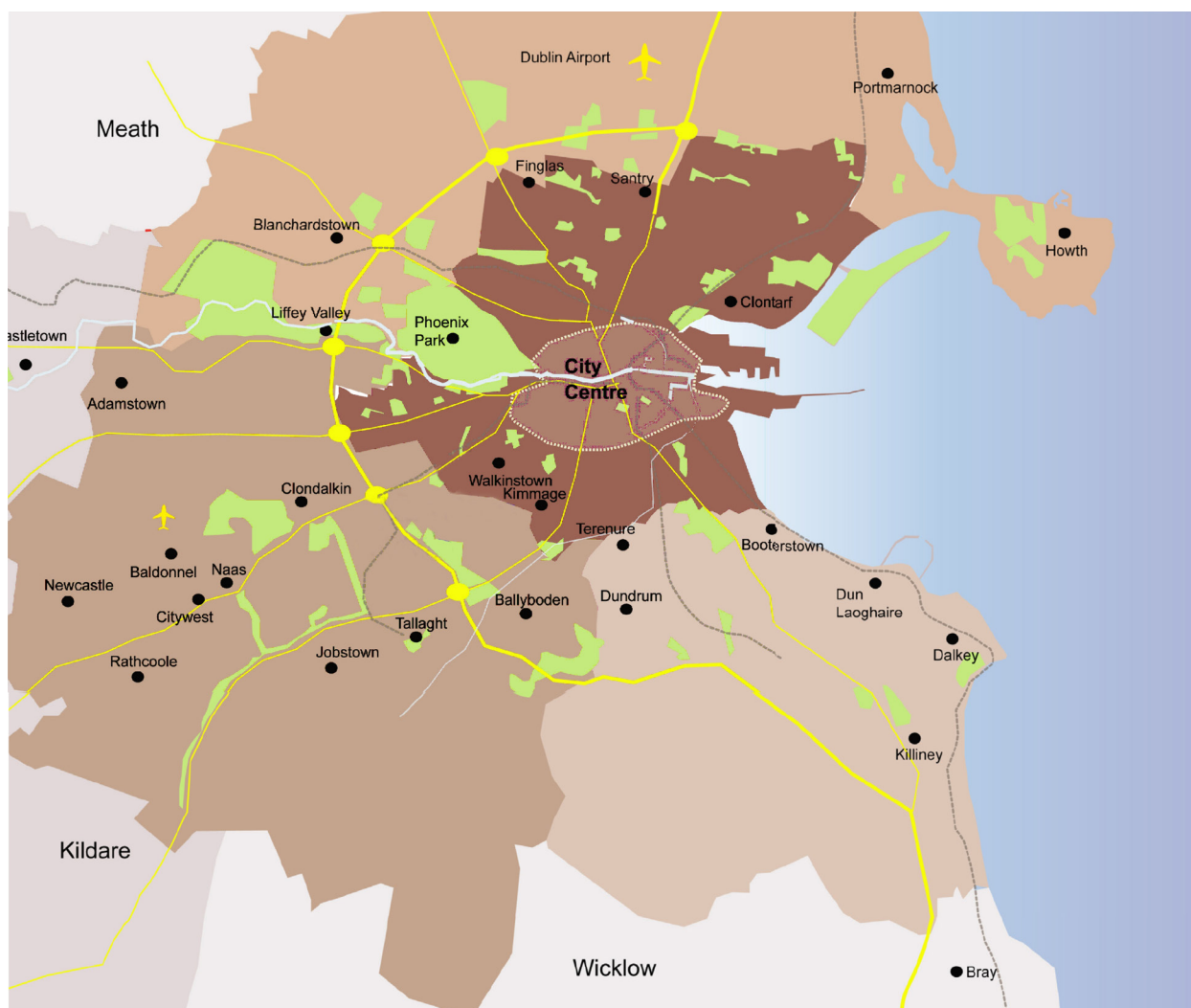
one of the country’s most essential national assets, however, pressures have increased significantly (EPA, 2008 and 2012). As Ireland’s economy grew, these pressures accelerated at a rate which exceeded that observed in other EU countries.

In their fifth and most recent state of the environment review, the EPA identified four priority challenges for the environment, which, if addressed successfully, should benefit the present and future quality of Ireland’s environment. These comprise: Valuing and Protecting our Natural Environment; Building a Resource-Efficient, Low Carbon Economy; Implementing Environmental Legislation; and Putting the Environment at the Centre of Our Decision Making. These challenges and their relevance to the Dublin City Development Plan (the Plan) are summarised in **Table 4.1**.

Table 4.1: EPA State of the Environment Report (2012) Key Challenges

Challenge	Relationship to the Dublin City Development Plan
Challenge 1: Valuing and Protecting our Natural Environment	The Plan needs to consider the objectives and precepts of other existing Policies, Plans and Programmes, such as the Habitats Directive and Water Framework Directive, to ensure that the issues addressed by these are brought forward into the overall planning process. The Plan needs to ensure sufficient natural environment policies are included within the Plan
Challenge 2: Building a Resource-Efficient, Low Carbon Economy	The Plan should: Promote climate change reduction measures, i.e., through waste reduction, renewable energy and sustainable practices Take account of potential climate change impacts when developing policies and objectives to ensure that the Plan does not contribute to the impact of climate change. In addition the Plan should consider the impacts of climate change when applying land use zonings to areas that are vulnerable to these impacts, e.g., flooding.
Challenge 3: Implementing Environmental Legislation	The Plan needs to consider the requirements of national and local level legislation in developing policies and objectives as well as EU and international obligations. Consideration with respect to enforcement should also be given in preparation of the Plan
Challenge 4: Putting the Environment at the Centre of Our Decision Making	The Plan needs to ensure that there is buy in from all levels of society and that the environment is at the centre of decision making. Consideration of the objectives of other existing Policies, Plans and Programmes at a national, regional and local level will aid in addressing the challenge of reversing environmental degradation

Figure 4.1: Dublin City Council in the context of the Dublin Region



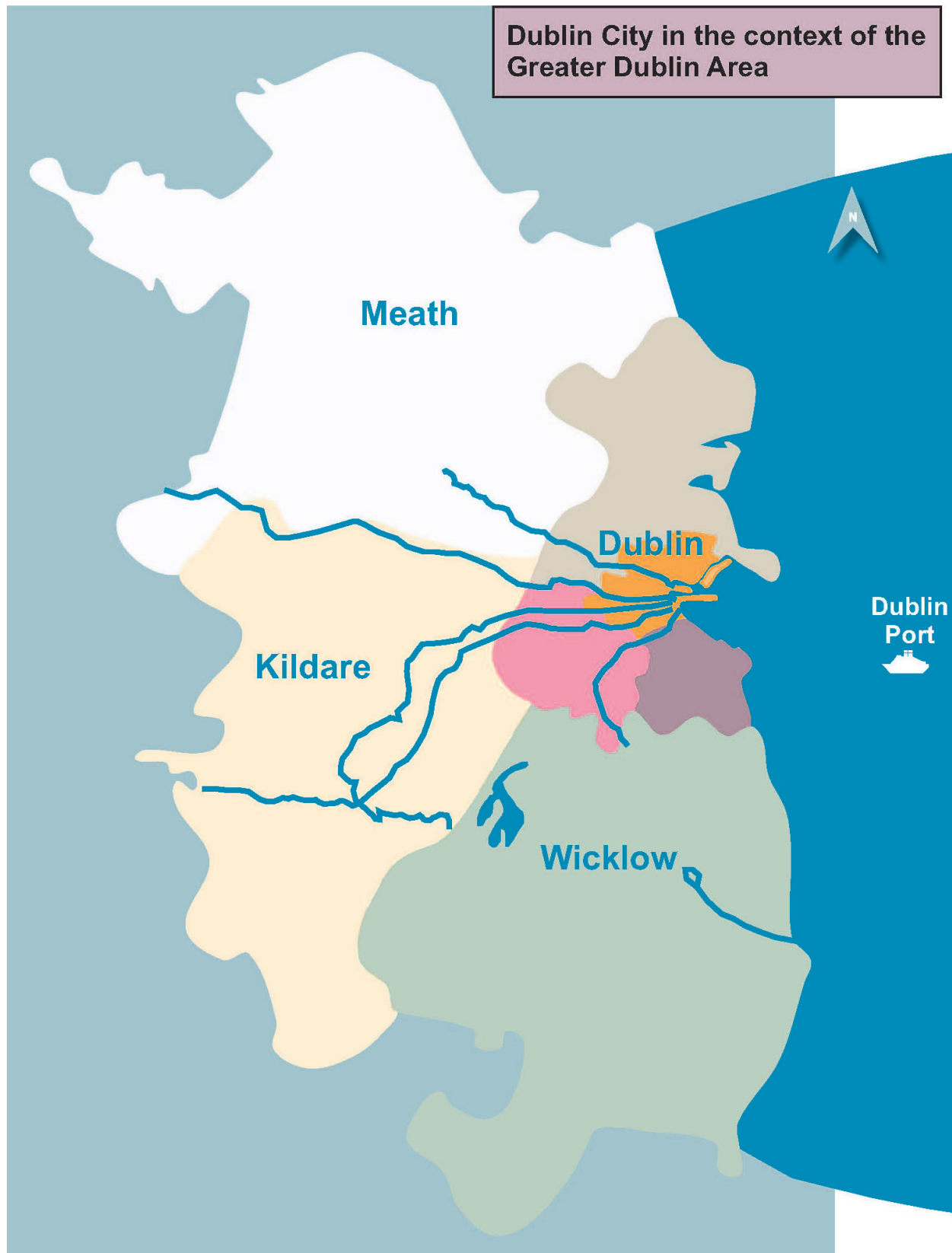
4.2 Relevant Aspects of the Current State of the Environment for Dublin City

The baseline data refers to the state of the existing environment of Dublin city. The main purpose of describing the existing environment is to identify the current state of the environment, against which the likely effects of implementing the Plan can be assessed. The impacts of the Plan can be estimated as the difference in environmental conditions with or without implementation of the plan. Dublin city's existing environment is characterised by way of a description of

the environmental receptors as set out in SEA Directive:

- Population and Human Health
- Biodiversity, Flora and Fauna
- Climatic Factors
- Air (air quality and noise)
- Water
- Material Assets (transport and waste management)
- Cultural Heritage (including architectural and archaeological heritage)
- Landscape and Soil

Figure 4.2: Dublin City Council in the context of the Greater Dublin Area



4.3 Population

Dublin City Council, one of four planning authorities in the Dublin Region, covers approximately 115km². Dublin city has a population of 527,612 persons (CSO Census, 2011) and has an overall density of approximately 4,588 persons per km², which accounts for 41% of the population of the Dublin Region and 11.5% of the State's population. See **Map 4.1** for Dublin City's location within the region and **Map 4.2** for Dublin city in the Greater Dublin Area.

The population of the city continues to grow and has been increasing steadily, having grown by 10% since 1991. Population has risen by 21,401 persons since 2006 equating to a population increase of 4.2%. During the same period, population increase in the state was 8.2%. However, the figures for the city mask the population increase in the inner city, which has increased by 50% since 1991. Even from 2006–2011, some areas such as North Dock B have experienced a significant population growth of 86.9%, whereas there has been a decrease in population in Ballymun and Mountjoy, as shown in **Table 4.2**.

Table 4.2: Population Growth across the City 2006–2011

Electoral Division (ED)	Absolute Change	% Change
Overall	21,041	4.2
Dublin City North	12,966	4.4
Dublin City South	8,435	4.0
North Dock B	3,205	86.9
South Dock	2,006	39.2
Grange B	1,695	59.1
Ballymun A	1,577	75.1
Ushers A	1,161	60.2
Mansion House B	301	39.2
Kimmage D	-225	-8.7
Rathfarnham	-301	-6.2
Arran Quay D	-382	-10.6
Ballymun D	-561	-15.9
Mountjoy B	-714	-20.7

There has been uneven growth across the city with some Electoral Divisions (EDs), mainly in the inner city, experiencing sharp increases in population while others have declined. A recent trend evident in Dublin is that people are moving out to the suburbs within the Greater Dublin Area. A further question, therefore, for the city council is whether it should encourage some of those in the 30–50 year age group to move into the city centre. This option has its own benefits in terms of energy conservation and sustainability. It would also bring other issues into sharp focus, such as the provision of high quality private residential and amenity space, high quality public open spaces, parks, schools and shopping. Currently one in five people in the city are in their twenties and one in five is over fifty-five (CSO, 2011).

4.3.1 Housing

The Housing Land Availability Study, submitted to the DECLG on an annual basis gives an indication of the land available in housing in each local authority area and the quantum of housing units that could be provided on that land at approximate densities. It is recognised that the city has a finite stock of zoned and serviced lands on which it must achieve sustainable compact living. The Housing Land Availability Study 2012 published by the Department of Community, Environment and Local Government estimates that there is circa 440 hectares of zoned available land for residential development in Dublin city, with the potential for c.52,000 dwellings. This potential needs to be carefully optimised given the finite land space.

Notwithstanding the economic downturn it remains a key objective to consolidate the city and maximise efficient use of land. This approach is in accordance with the settlement strategy under the Regional Planning Guidelines (RPGs) for the Greater Dublin Area (GDA) 2010–2022, which places a strong policy emphasis for the city's metropolitan area to gain maximum benefit from existing assets such as public transport and social infrastructure through the continuation of consolidation and increasing densities within the existing built-up footprint of the metropolitan area.

The RPG figures are based on the 2006 census, however, and do not take account of the 2011 census and regional data up to 2014. The Greater Dublin Area, along with Laois, Longford, Louth, Offaly and Westmeath, comprise the Eastern and Midlands Regional Assembly, established on 1 January 2015. It will be a key task

of the Regional Assemblies to prepare Regional Spatial and Economic Strategies (RSES), expected to cover the period 2016–2022, which are intended to replace the current RPGs.

In order to reach the population targets set out in the RPGs, a very significant population increase will be required in Dublin city. The CSO estimated the 2013 population in Dublin city was 530,208. With the 2022 RPG target of 606,110, the city would be required to grow by an estimated 75,902 between 2013 and 2022 or 59,038 over the Development Plan period.

As the RPG targets are likely to be revised in the future based on the 2011 census and more up to date population data, housing allocation numbers are likely to change based on the best available projections. Based on the current best available data, the calculated housing requirement for 2015–2022 is 29,519 with an estimated annual housing requirement of 4,217 units per year up to 2022.

Currently there is some pressure to provide low density suburban type housing and studio/micro-apartments. Dublin city needs to be aware of people's preferences for certain types of housing, the provision of house types that cater for a cross-section of life stages and to develop it in a sustainable manner given space constraints. There is also a growing demand for social housing and improved housing services in regeneration areas and elsewhere and the challenge lies in provision of such housing having regard to constrained exchequer funding and capital expenditure.

There are 10 remaining unfinished housing developments in the Dublin City Council area. The vacancy rate in Dublin city decreased from 11.7% in 2006 to 10.7% in 2011, which is high compared to vacancy rates in other local authorities, such as 5.4% for South Dublin. The challenge for Dublin city is encouraging the use of the existing vacant stock to help cater for rising housing demand.

Dublin City Council is the lead statutory authority for homelessness in the Dublin region and continues to implement the Homeless Action Plan.

4.3.2 Human Health

The human health impacts relevant to SEA are those which arise as a result of interactions with environmental receptors, e.g., environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm and can be transported so that they come into contact with human beings. Air and noise are discussed separately in preceding sections. The creation of a 'healthy and clean, green, vibrant, inclusive and safe' urban environment is central in the city's current and future planning policies. The recreational open spaces available to the city's population are comprised of approximately: 120 large open spaces, 260 playing fields, 120 playgrounds, 88 public parks (including open spaces and gardens), 4 beaches, 2 nature reserves, 1 main river and its associated boat clubs and walks and 2 canals. There are also 128 places of worship, 69 hospitals and nursing homes, 216 educational institutions and 396 childcare facilities.

The city's interconnected network of green spaces, or green infrastructure, is used and enjoyed by its residents and by visitors to the city and is an important component of Dublin city's tourism and attractiveness as a destination. Dublin City Council has developed facilities in parks to increase their capacity to host international and national cultural, historical and sporting events and competitions. Recent projects to enhance visitor facilities can support economic development and includes the re-development of St Anne's Park and Herbert Park to provide tearooms, and new tearooms at Harolds Cross Park and St Patrick's Park. The recent provision of free Wi-Fi in parks has further enhanced their infrastructural importance.

Dublin City Council has been pro-active in delivering and managing a range of sporting facilities. Multi-use games areas (MUGAs) have risen in popularity because of their appeal to different age groups. In recognition of the expanding role of sport and recreation, the Dublin City Sport and Active Recreation Strategy 2009–2016 outlines how the Council can work with interested parties to deliver high quality and sustainable sport and active recreation services.

During the period of the previous Plan, the Council, as lead agency, has developed with its partners and published the Dublin City Play Plan – 'Play here, Play there, Play everywhere' (2012–2017). The City Council has also significantly expanded the availability of allotment and community gardens through both direct provision in its parks and facilitation on other sites, in accordance with the Planning and Development (Amendment) Act 2010.

4.3.3 Existing Environmental Issues relating to Population and Human Health

The following broad range of issues has been identified for Population and Human Health:

- Need to encourage people to move into the city rather than out to the suburbs in the interests of sustainable development.
- Demand for more housing units and finite stock of zoned and serviced lands.
- The city has a high vacancy rate and should encourage the use of the existing vacant stock.
- The effect of changing economic circumstances on population figures.
- Transboundary impacts with other Dublin Region Local Authorities. These cumulative impacts need to be taken into account.
- Requirement for adequate infrastructure to serve areas of future development and/or areas of increased density.
- Traffic-related air emissions and impacts to both health and as a contributor to climate change.
- Quality of housing, density and locations must be supported by adequate community facilities and services.
- Additional quality open space must be provided to support our increasing density of population.
- Existing green and recreational spaces must be maintained and developed.
- Noise in the city, if excessive, can be extremely detrimental to the physical and mental health of the population.
- The provision of water and sanitation systems must be of sufficient capacity to provide clean, easily accessible water and remove waste products to sustain existing and future populations. The new national utility company Irish Water is responsible for providing safe, clean and affordable water and wastewater services for Dublin city.
- The supply, storage and treatment of water are all major issues for the city and now lie within the remit of Irish Water.
- Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to shared regional issues.

4.4 Biodiversity, Flora and Fauna

Dublin city is a largely urban environment and is partially built on reclaimed or in-filled lands. The city and its bay, as a natural harbour at the confluence of several river basins, contain a variety of ecosystems that are biologically diverse and of international and national importance for the species which inhabit them and their associations, as shown in **Map 4.3**. The ecological value of these areas is a resource for Dublin's citizens and also remarkable for such an urbanised capital city.

The City Council has an objective to promote connectivity of habitats and the enhancement of green corridors of public open space both for biodiversity and amenity values. The system of freshwater streams, rivers, estuarine habitats and beaches that is managed by Dublin City Council provides a network of connected natural areas, part of the green

infrastructure of Dublin city. To protect and enhance this natural asset, several management plans have been prepared for all aspects, including biodiversity and flora and fauna, for the Dodder, Tolka, Liffey and North Bull Island. Habitat management plans have also been prepared for a number of city parks, including Bushy Park and Le Fanu Park. See **Maps 4.4** and **4.5** for an overview of biodiversity in the city.

4.4.1 Overview of Habitat Types

The main habitat types of Dublin city include those of international importance under the Habitats Directive. These are classified according to the Heritage Council's classification system:

- Sand dunes (CD1, CD2, CD3)
- Annual vegetation of drift lines (LS1)
- Coastal lagoon (CW1)
- Saltmarsh (CM1, CM2)
- Mud flats and sand flats (LS)
- Estuary (MW4)
- Semi-natural grasslands (GS)
- Hedgerows (WL1)
- Reed and large sedge swamps (FS1)
- Lakes (FL)
- Other artificial lakes and ponds (FL8)

- Depositing lowland rivers (FW2)
- Canals (FW3)
- Drainage ditches (FW4)

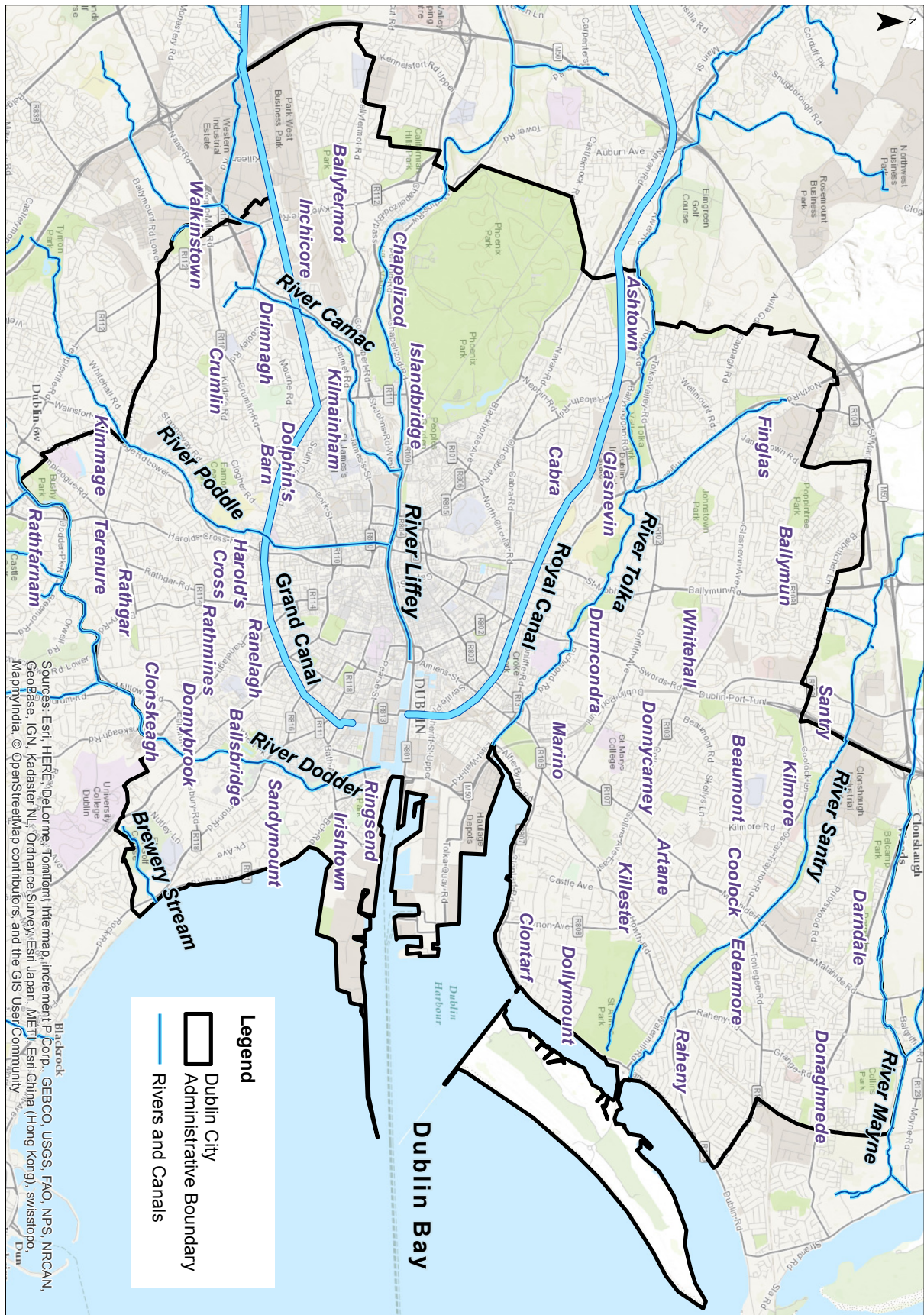
Other habitat types not listed above can be present and offer important areas for wildlife, including protected flora and fauna.

4.5 Protection of the City's Natural Heritage

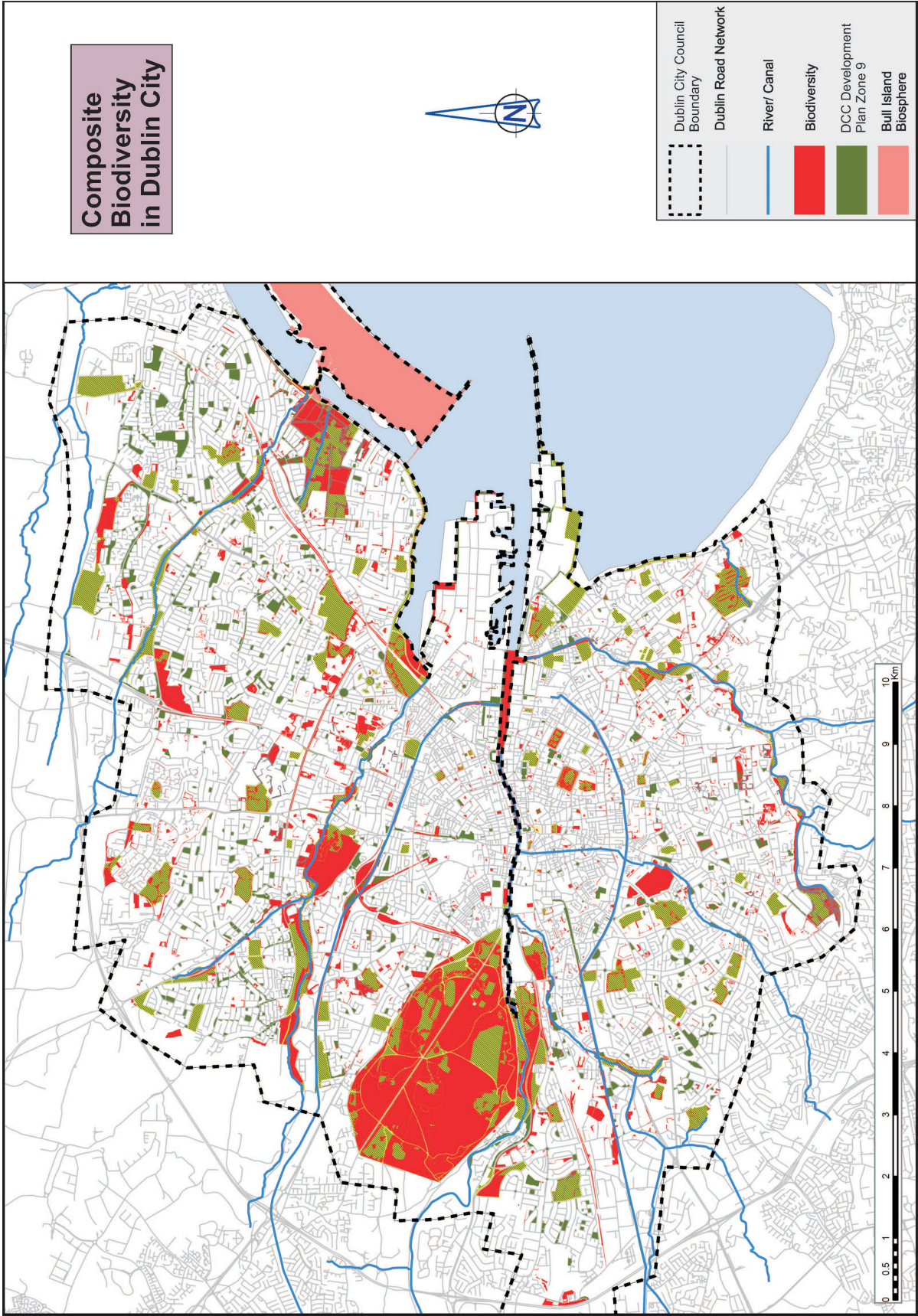
There is a level of protection offered to sites of biodiversity which are zoned Z9, amenity/open space lands.

Sites of international and national importance are protected under legislative designations. Dublin city includes a number of designated sites. There are also European (Natura 2000) Sites which are outside the city council boundary but could be impacted. These have been taken into consideration for any objectives and policies within the development plan, under EU and Irish laws, on the effects of plans and proposals on associated sites. For example, plans for riverine environments in the city could affect estuarine environments in other local authority areas downstream.

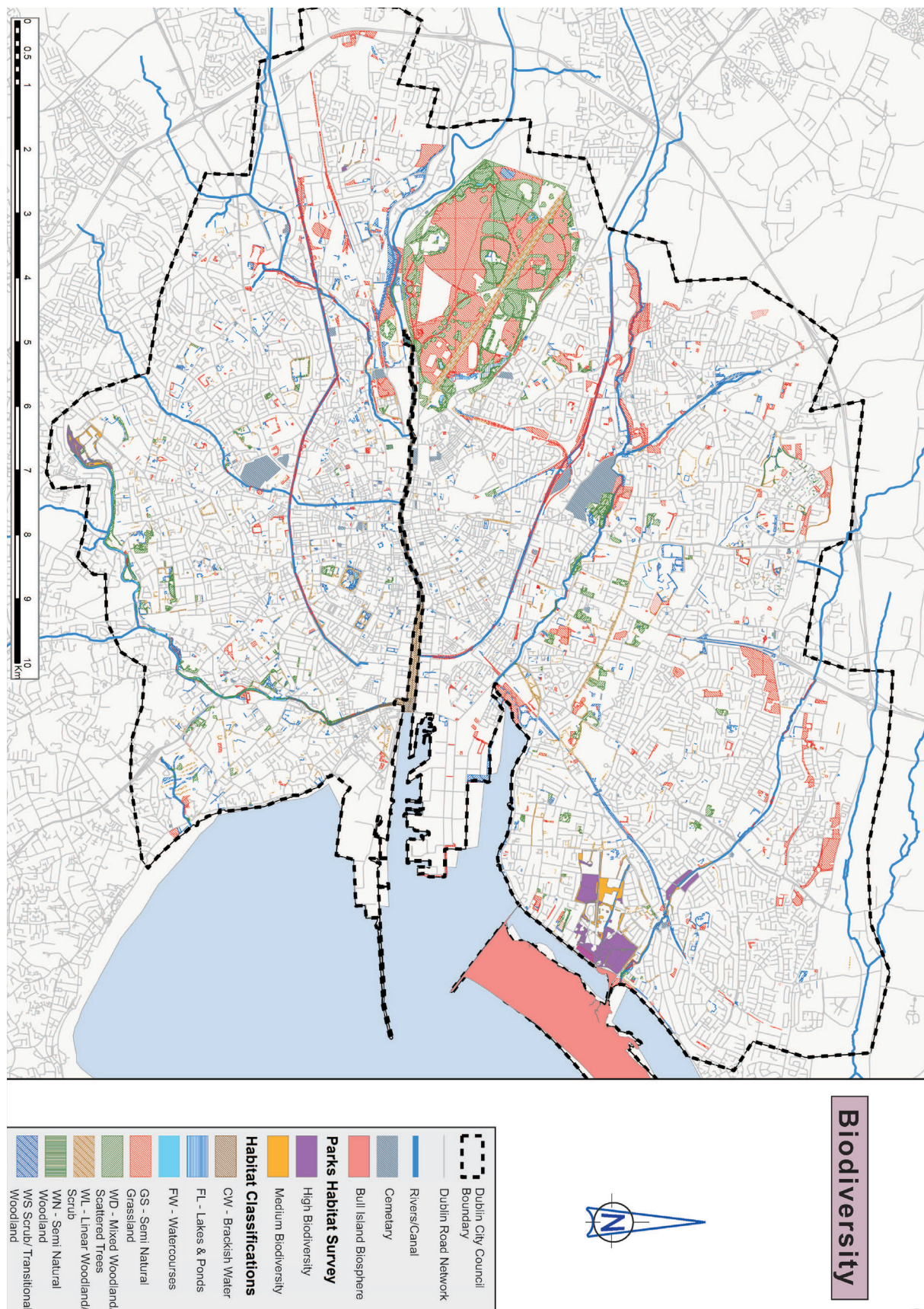
Map 4.3



Map 4.4



Map 4.5



4.5.1 Appropriate Assessment

As part of the Plan review, an Appropriate Assessment of the Plan was undertaken under Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Fauna (commonly referred to as the Habitats Directive) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011). The purpose of Appropriate Assessment is to determine whether the Dublin City Development Plan 2016–2022 is likely to have any significant impacts on the conservation objectives or qualifying features of the 24 European Designated European sites identified within a zone of influence of Dublin City Council's administrative boundary (see **Map 4.6**).

4.5.1.1 Special Areas of Conservation (SAC)

North Dublin Bay is a candidate SAC, and includes North Bull Island. The site straddles both Dublin City and Fingal County Council administrative areas and covers the inner part of North Dublin Bay, the seaward boundary extending from the North Bull Wall Lighthouse to the Martello Tower at Howth Head.

South Dublin Bay is also candidate SAC. This site includes Booterstown Marsh, along the city boundary and straddles both Dublin City and Dún Laoghaire-Rathdown County Council administrative areas. The site lies south of the River Liffey and extends from the South Wall to the West Pier at Dún Laoghaire. The new habitats at Merrion Gates and just south is becoming increasingly important for roosting waterfowl and includes embryonic dunes and a sand spit. The largest stand of eelgrass on the east coast occurs within this designated area at Merrion Gates.

It should be noted there is a new offshore SAC designated in the Irish Sea since the last Plan – Rockabill to Dalkey Island SAC. This SAC is outside the Dublin city boundary, approximately 2.4 km off the Dublin coastline and is designated for reefs and the harbour porpoise.

In addition, there exists the potential for a site located approximately 30 km east of Dublin city to become designated in the future as an SAC for the protection of 'leaking gas structures' (an Annex I habitat). This site is currently called the Codling Fault Zone SAC (site code: 003015).

4.5.1.2 Special Protection Areas (SPAs)

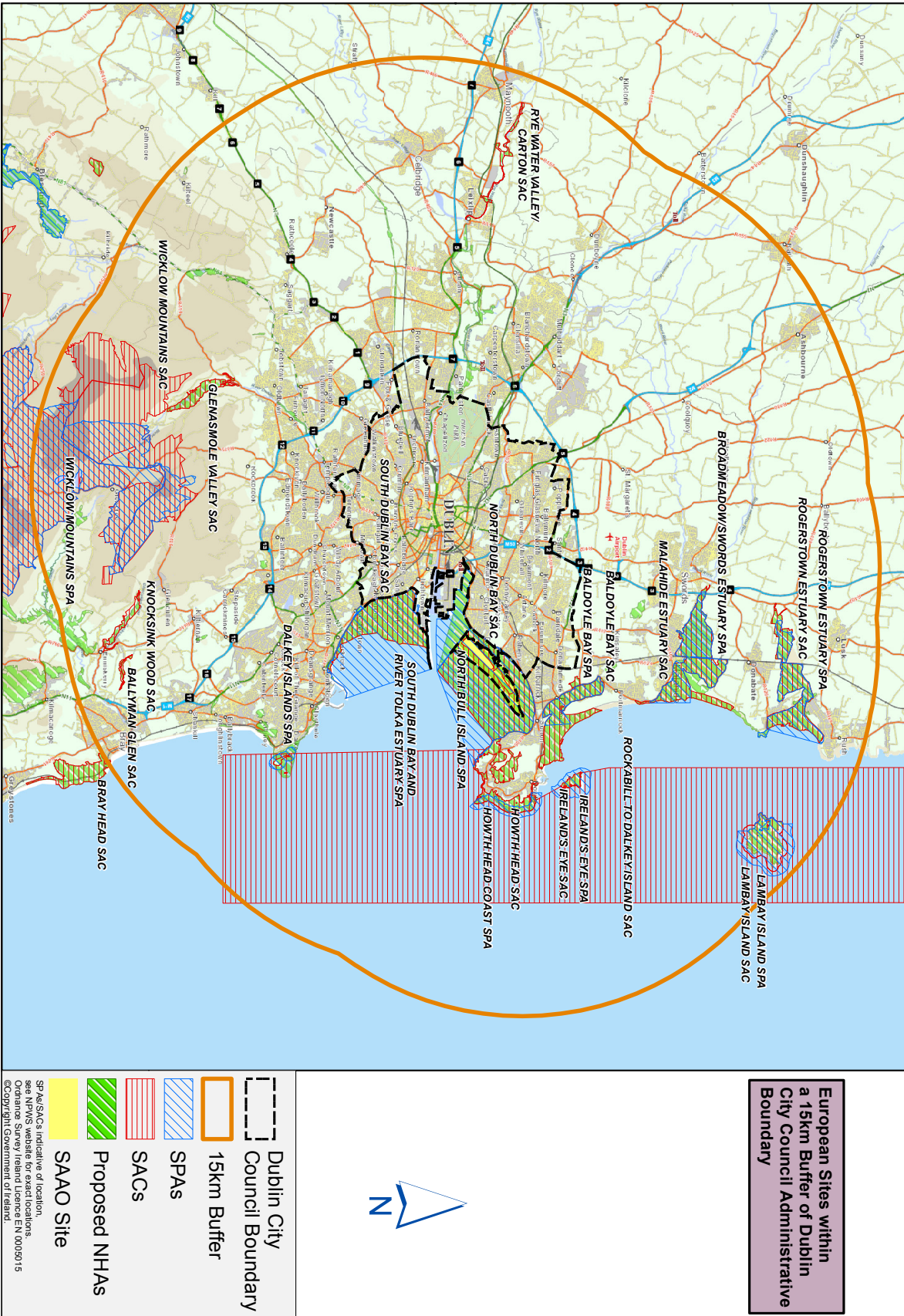
SPAs are sites which are legally protected for birds under the EU Birds Directive. There are two in Dublin City: South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA.

4.5.1.3 Natural Heritage Areas (NHA)
Dublin City Council manages several proposed Natural Heritage Areas (pNHA) which are: North Dublin Bay, South Dublin Bay, Mooring 'Dolphins', Dublin Docks near Pigeon House Harbour, the Royal Canal and the Grand Canal. These are designated under the Wildlife Act as of national importance for the habitats and/or species present.

4.5.1.4 RAMSAR Sites

North Bull Island and Sandymount Strand are listed sites in Dublin city under the RAMSAR Convention of 1971 (signed by Ireland in 1985) as wetlands of international importance, particularly for wildfowl habitats. It is a voluntary treaty of which Ireland is a signatory. The RAMSAR committee for Ireland is currently compiling a national database on wetlands however there is currently no database for Dublin city.

Map 4.6



4.5.1.5 Special Amenity Area Orders (SAAO)

North Bull Island is a National Special Amenity Area, representing a landscape of national importance for its aesthetic and recreational value; Bull Island is one of three such designations in Ireland and was designated under Special Amenity Area Order in 1994. There is a proposed SAAO under consideration for the river Liffey valley. While these sites are designated by Ministerial Order on the basis of their outstanding amenity values, it is the natural heritage of both locations which provides the resource for recreation and amenity. Protection of biodiversity, flora and fauna is therefore a contributing factor to amenity potential.

4.5.1.6 National Nature Reserves

North Bull Island and Baldoyle Estuary are both designated national nature reserves under the terms of the Wildlife Act.

4.5.1.7 Flora Protection Order Sites

The making of a Flora Protection Order under the Wildlife Act provides protection for nationally important sites for protected plants. North Bull Island is listed for lesser centaury, hemp nettle and meadow saxifrage. The Royal Canal is listed for opposite-leaved Pondweed.

4.5.1.8 Conservation Areas

This designation is for sites of local importance as listed in the Development Plan. It includes the rivers Dodder, Tolka and Liffey.

4.5.1.9 Designated Shellfish Waters

Under Article 5 of the Shellfish Water

Directive (2006/113/EC) Malahide Shellfish Area, located approximately 3.2 km to the north-east of Dublin City's boundary, has been designated as shellfish growing waters. A pollution-reduction programme was established by the minister for the Environment, Community and Local Government to protect these waters and improve water quality.

4.5.1.10 UNESCO Biosphere Reserves

North Bull Island was recognised on the UNESCO World Network of Biosphere Reserves in 1981. North Bull Island is unique among biosphere reserves given its close proximity to a capital city. There are two golf clubs on the island, the Royal Dublin Golf Club and St Anne's Golf Club; these are not part of the biosphere reserve extents itself but are integral to the site and have important links to the reserve, as shown in **Map 4.7**.

4.5.1.10 Ecological Networks

The importance of ecological networks is recognised in the Habitats Directive under Article 10, which requires connectivity of ecological networks, including those habitats outside of designated sites, is maintained.

4.5.2 City Biodiversity Action Plan (2008–2012)

The Biodiversity Action Plan (BAP), and which is currently under review, was produced by Dublin City Council as an objective of the Dublin City Development Plan 2005–2011 and as part of the Countdown 2010 initiative of the fifth Environment for Europe Ministerial Conference to demonstrate pan-European commitment to take necessary actions to prevent loss of biodiversity. It also fulfils an objective of the Irish National Plan for Sustainable Development for local authorities to integrate sustainability into policies and functions.

The BAP lists actions for:

- Collection and management of data.
- Increasing community awareness of biodiversity through education, dissemination and interpretation.
- Developing plans and policies to protect biodiversity.
- Identifying, protection and implementing management programmes for biodiversity in public parks and open spaces.
- Targeting resources.

The BAP lists all flora, fauna and habitats in Dublin city protected by European and Irish legislation. Additionally, it lists invasive and pest species for flora and fauna which threaten the city's biodiversity.

4.5.3 Green Infrastructure

The council has an objective in the existing Plan to promote connectivity of habitats and the enhancement of green corridors of public open space both for biodiversity and amenity values. The system of freshwater streams, rivers, estuarine habitats and beaches that we manage provides a network of connected natural areas, the green infrastructure of Dublin city. Green infrastructure strategies are recognised as an essential component in European, national and regional policies. The city's green infrastructure network includes historic parks, gardens and Georgian squares of national and international importance. Green infrastructure is recognised as comprising an essential component contributing to quality of life and well-being for residents, in addition to conserving habitat connectivity and reducing habitat fragmentation. To protect and enhance this natural asset, Dublin City Council

has prepared several management plans for all aspects, including biodiversity and flora and fauna. These plans include the Dodder, Tolka, Liffey and North Bull Island.

In addition the Parks and Landscape Services Division has produced habitat management plans for individual parks such as Bushy Park, Le Fanu Park, Springdale Park, St Anne's Park and St Kevin's Park. Since 2011 the City Council has prepared conservation studies for many parks and gardens, including:

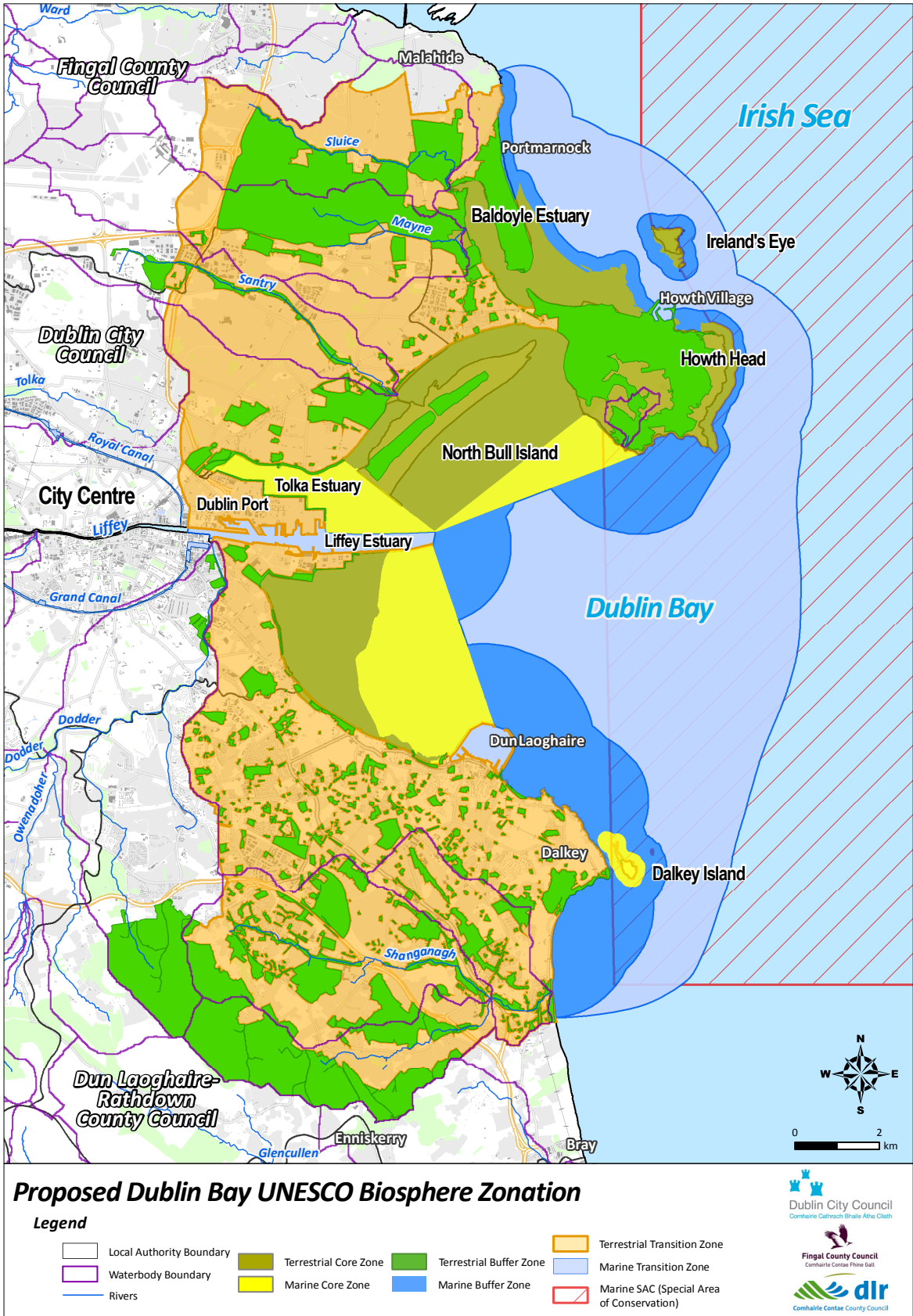
- Merrion Square;
- Mountjoy Square;
- Palmerston Park;
- Herbert Park; and
- Sandymount Green.

The Office of Public Works has also been preparing conservation plans for properties within its management. They include: Phoenix Park (completed), St Stephen's Green and Grangegorman Military Cemetery (both in progress).

The Masterplan for Cardiffsbridge Park included a habitat survey of flora and fauna carried out on behalf of Dublin City Council's Parks and Landscape Services Division, which showed the potential for a range of mammals and amphibians protected under the Habitats Directive along this portion of the River Tolka.

A review of fish stocks carried out for the river Tolka by Inland Fisheries Ireland in 2011 indicated the presence of juvenile Atlantic salmon, represent the first record of wild salmon reproducing in this river in a century. A Fishery Enhancement Plan for Phase 1 of Cardiffsbridge Park, Finglas (2006) was prepared as part of the Master Plan for Cardiffsbridge Park. Dublin City

Map 4.7



Council has also collaborated with Inland Fisheries Ireland, Queen's University Belfast and local angling clubs in a genetic study of trout populations in all of the city's major rivers to determine spawning areas and population sources for future management of fisheries stocks.

4.5.4 Current Environmental Monitoring Information

Dublin City Council currently surveys and monitors the habitats and species of the landscape of Dublin city fulfilling the statutory obligations under Irish and European legislation. This also assists in the management of public parks and open spaces. Furthermore, the information is vital for the assessment of planning applications and for the making of local area plans. The information is still contained in different park management plan reports, as listed previously and in surveys by individual habitat/species, as outlined in the following sections.

4.6 Survey and Monitoring by Habitat

A number of habitat surveys have been undertaken by Dublin City Council and they provide a baseline for monitoring by habitat types and ensure compliance with the Habitats Directive and the Wildlife Act. These will be updated on a regular basis, to inform management of parks and open spaces and determine areas of importance in private ownership. A GIS database has been established for all parks and open spaces, to align biodiversity mapping with design and planning of our city landscape and to conform to best practice for the management of green infrastructure, in

accordance with the Regional Planning Guidelines for the Greater Dublin Region.

4.7 Survey and Monitoring by Species

A Butterfly Monitoring Scheme for public parks commenced in 2008 on a city-wide basis, to provide data for parks management and to contribute to the national Irish Butterfly Monitoring Scheme.

As part of the implementation of the St Anne's Park Management Plan the Red Squirrels Project is currently on-going since 2008, to continue the monitoring of the populations of red (native) and grey (non-native) squirrels in the Park. The red squirrel is protected under the Wildlife Act and the Park is the last site left in Dublin City for this species, which is threatened.

A Survey of Invasive Species was completed in 2009. The study area included all watercourses in Dublin City, and identified these as the primary zone through which invasive species can spread. The Parks and Landscape Services Division have a continuous programme of management and monitoring for public lands, including: parks, open spaces, verges and river valleys. Dublin City Council also engages with voluntary organisations to address invasive species and help with removal in public places.

For 2009–2012 Dublin City Council participated in a pilot survey of populations of Daubenton's Bat along several watercourses in Dublin city. All species of bats in Ireland are protected under the Habitats Directive. These, along with data received from planning studies,

have been collated into a city-wide database to monitor bat populations, which have been declining during the recent rapid urbanisation of parts of Dublin city and county.

There are currently 21 invasive alien species (IAS) (19 of which are nationally classified as high risk), recorded in Dublin city, and many are expanding their range. Prevention is the most cost-effective approach. It is the policy of Dublin City Council going forward to:

- Ensure compliance with the Birds and Habitats Regulations (2011) and the EU Invasive Alien Species Regulations (2014) to deal with IAS in all developments in Dublin City;
- To undertake monitoring and control of all legally designated IAS in Dublin City in co-operation with adjoining local authorities and the National Biodiversity Data Centre;
- To develop and implement a Dublin City Invasive Alien Species Action Plan to guide compliance with legislation for all future developments within Dublin city and for works and maintenance by the Council; and
- To develop Biosecurity Codes of Practice that are compulsory for all works in Dublin city and to guide recreational users of Dublin city waterways.

4.7.1 Key Projects Likely to Influence Biodiversity in the City

Any projects which front onto the city's system of rivers and canals will have potential impacts on natural heritage, due to the importance of designated habitats cited previously. The exceptional rate of growth of the city in recent years has put

greater pressure on biodiversity, and sites are being developed closer to these zones as space becomes scarce. In outlying areas, hedgerow loss has been a concern, with the development of greenfield sites. The North Fringe area contains greenfield sites on the river Mayne which will be of importance to natural heritage. The river offers a connecting greenway to the coast through parklands in the Fingal County Council administrative region.

Dublin City Council has been managing public open space along the river Tolka at Glasnevin Downs and Violet Hill. Violet Hill is currently a monitoring site for Bat Conservation Ireland.

The following sites have been identified as having high biodiversity potential and, as a result, more sensitive to development:

- Institutional lands at Holy Faith Convent at Glasnevin Hill / Old Finglas Road;
- Enclosed private lands between the National Botanic Gardens and Glasnevin Cemetery on the river Tolka; and
- Institutional lands at Archbishop's House, Drumcondra.

Proposed development along watercourses and the foreshore should be sensitive to relevant aquatic and riparian species (protected and indicator species) both within the site and along the watercourse. River systems are covered under water quality directives – Freshwater Fish Directive and Bathing Water Directive (where they feed into such waters) and also contain species protected under the Habitats Directive.

Development of sites adjoining roosting, feeding and breeding sites can cause

disturbance to fauna and threaten biodiversity. For example, construction activities can generate noise, dust and disturb patterns of migratory birds, otters and other highly mobile mammals. Lighting design can affect potential for bat roosting and feeding and connectivity of habitat. Removal of trees and hedgerows can have an impact of a range of protected fauna.

The National Biodiversity Action Plan and subsequent Actions for Biodiversity (2011–2016) also recognises climate change as a significant driver contributing to biodiversity loss.

4.7.2 Non-implementation of the Development Plan

The Dublin City Development Plan 2016–2022 includes policies for the protection and enhancement of biodiversity, flora and fauna and it aims to strengthen the recognition of green corridors under the Habitats Directive. It will support measures for protection of important habitats and mitigation of impacts of construction and development. In the absence of the Plan and its proactive policies and objectives, it is likely that further loss and degradation of habitats would occur. It is also likely that the survival of individual species of flora and fauna would be threatened greatly with loss within the Dublin City Council area.

4.7.3 Existing Environmental Issues relating to Biodiversity, Flora and Fauna

There are many potential threats to the management of biodiversity, flora and fauna inherent in the pressures of the high density of population and development of Dublin city and the naturally diverse heritage of Dublin Bay and its associated riverine ecosystems. The following broad range of

issues has been identified, which include localised as well as more strategic issues:

- Potential increased flood risk from changed land-use patterns, climate change and predicted sea rise level could result in loss or alteration of habitats through erosion and alteration of levels.
- City Council area is traversed by a number of key regional river systems; future development within the city area should not have a deleterious effect on the aquatic life in these systems.
- The existing wastewater treatment plant at Ringsend is operating over its design capacity and has no additional capacity to facilitate the anticipated increase in population in the city. This will potentially lead to deterioration in water quality and associated ecological impacts if no mitigation measures are put in place.
- Increased volumes of surface water run-off due to conversion of permeable landscapes to impermeable. This can lead to increased flooding, erosion and alteration and direct loss of habitat.
- Increased frequency of high rainfall events due to climate change can result in sudden elevated levels of pollutants contaminating aquatic habitats.
- Existing faulty connections and combined sewer overflows resulting in contamination of surface waters with effluent and degradation of aquatic habitats.
- Degradation in water quality and ecological status from upstream pollution to rivers.
- Potential for interference with inland and marine waters morphology and aquatic habitats by watercourse diversions,

channel diversions and alterations or removal of bank vegetation can threaten some of the most important species of flora and fauna.

- Lack of mitigation on construction sites leading to localised pollution of watercourses.
- Lack of protection and mitigation of impacts of existing flora and fauna on construction sites.
- Changes in temperature and precipitation levels due to climate change resulting in some species being replaced or under stress.
- Replacement of native species of flora and fauna by non-natives due to improper land management practices.
- The presence of invasive species in problematic areas such as river valleys and the potential for the introduction, movement and spread of such species during development without proper measures.
- Recreational uses can result in pressures on the sand dune system of North Bull Island as identified by the NPWS in the Coastal Monitoring Project Report (2004–2006).
- Pressures can also arise on other coastal areas due to increased commercial, industrial and recreational activities, including more activity in Dublin Bay.
- Loss of connectivity of habitats for wildlife by development which interrupts or is too close to existing green corridors.
- Greater powers and extent of enforcement of existing legislation required for local authorities to protect biodiversity, flora and fauna, e.g., tree protection measures, control of dogs in vulnerable habitats in parks.
- Need to ensure biodiversity interests taken into account in earliest stages of planning of new developments.
- Further Dublin City Council's objectives for sustainable urban drainage systems (SUDS) for public open spaces in existing and future developments.
- Continued efforts with Heritage to ensure implementation of the Biodiversity Action Plan.
- Demolition of older structures (buildings, walls, out-buildings) due to rapid growth results in loss of habitat for fauna.
- Lack of survey and research data limits tools for decision-making in planning for biodiversity.
- Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to shared regional issues.
- Balance between accommodating future development, recreational, heritage and biodiversity needs of Dublin city.
- Protection EU and Irish designated sites especially Dublin Bay.
- Protection of areas, sites and natural features of high biodiversity quality not designated under EU or national legislation.
- Protection and enhancement of the biological diversity of surface water systems in the city.
- Importance of ecological corridors to maintain biodiversity.

- Incorporation of biodiversity into development proposals, e.g., greenway, roof gardens, etc.

4.8 Air and Noise

4.8.1 Air Quality

Air quality in Dublin City is currently good. In particular years Dublin's air quality has shown significant improvement in the levels of black smoke, lead, sulphur dioxide, benzene and carbon monoxide (CO). This is due largely to the success of the regulatory ban on the sale of bituminous coal in the Dublin region and the elimination/reduction of other substances in vehicle fuels. Monitoring of black smoke was mandatory until 2005, and was revoked on the introduction of the Air Quality Framework Directive and the CAFE Directive (2008/50/EC), where PM₁₀ monitoring has replaced it. Monitoring of black smoke is still encouraged by the EPA however, as it is valuable in tracking long-term trends in urban areas.

In 2013 measured sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone, particulate matter (PM₁₀ and PM_{2.5}), heavy metals, benzene and polycyclic aromatic hydrocarbons (PAH) concentrations in Ireland were all below their individual limit and target values, as set out in the CAFE Directive (2008/50/EC) and 4th Daughter Directive (2004/107/EC). Ireland was however above the tighter World Health Organisation (WHO) guidelines for PM₁₀, PM_{2.5}, ozone and PAH. This may have future implications for Ireland should these tighter guidelines become adopted by the EU following the Commission's review of air quality directives.¹ The Clean Air Policy Package was announced by the European Commission in 2014 and will involve a shift

in tackling air emissions at source with the possibility of introducing these tighter air quality standards from 2020 onwards.

As can be seen from **Figure 4.3** to **Figure 4.7** the improvement in respect of a number of pollutants has been profound, sustained, and compares favourably with other urban centres with Zone B representing Cork and Zone C representing other urban centres such as Limerick, Galway and Drogheda, among others.

According to the National Development Plan the key challenges in relation to air quality are nitrogen oxides (NO_x) and particulate matter (PM₁₀ and PM_{2.5}).

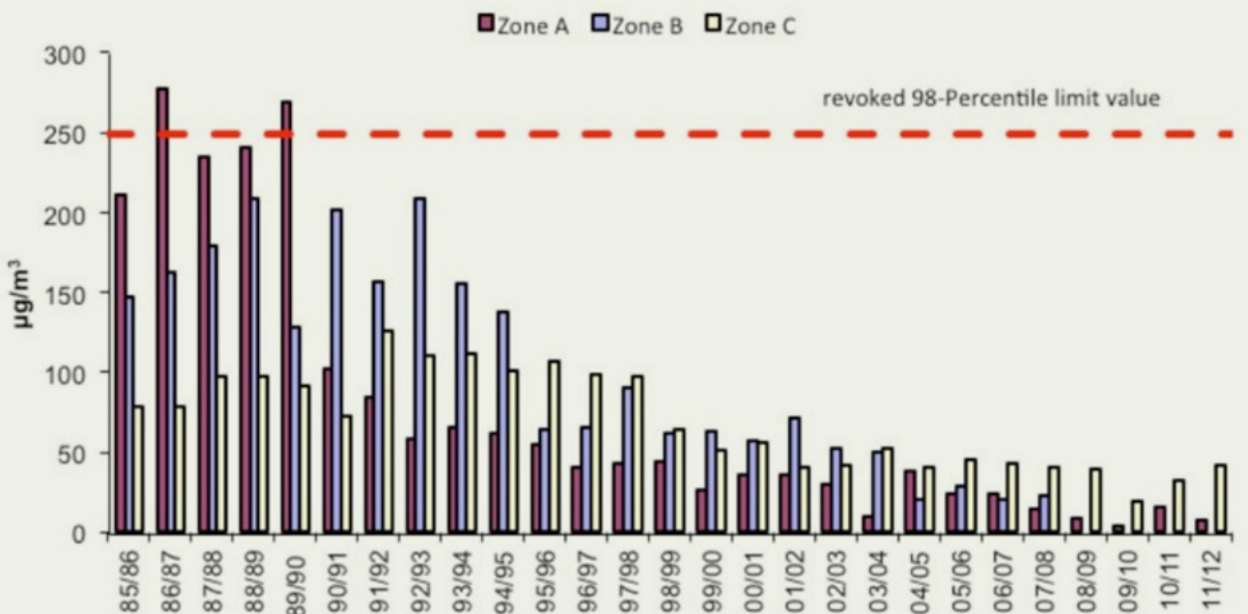
Oxides of nitrogen (NO_x) During the 1990s nitrogen dioxide levels exceeded limit values. While the current results are in compliance with the annual limit value the levels are sufficiently high to be of concern in relation to compliance in the future, especially with regards to over-reliance on motorised transport.

PM₁₀ and PM_{2.5} concentrations remain a threat in terms of exceeding limit values at some locations, should a combination of factors (including unfavourable weather conditions and traffic emissions) occur. It should be noted that from a national perspective the highest (daily maximum) PM₁₀ levels recorded during 2013 were in Zone C (Ennis, Bray and Galway).

The energy and transport sectors are major contributors to the emissions of these air pollutants. The industrial sector is also a significant contributor to NO_x emissions. The pollutant emissions emanating from vehicular sources are also those to which the public may be

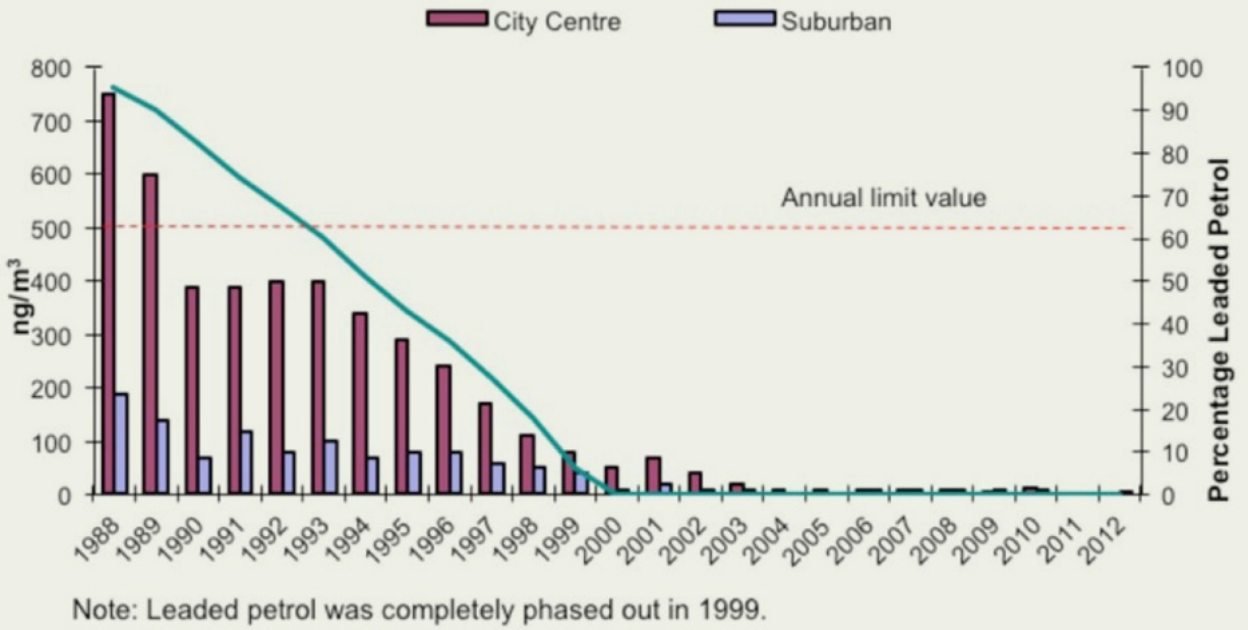
¹ Air Quality in Ireland 2013, Key Indicators of Ambient Air Quality (EPA, 2014)

Figure 4.3: National Trends in Black Smoke Levels in Ambient Air 1985 to 2012



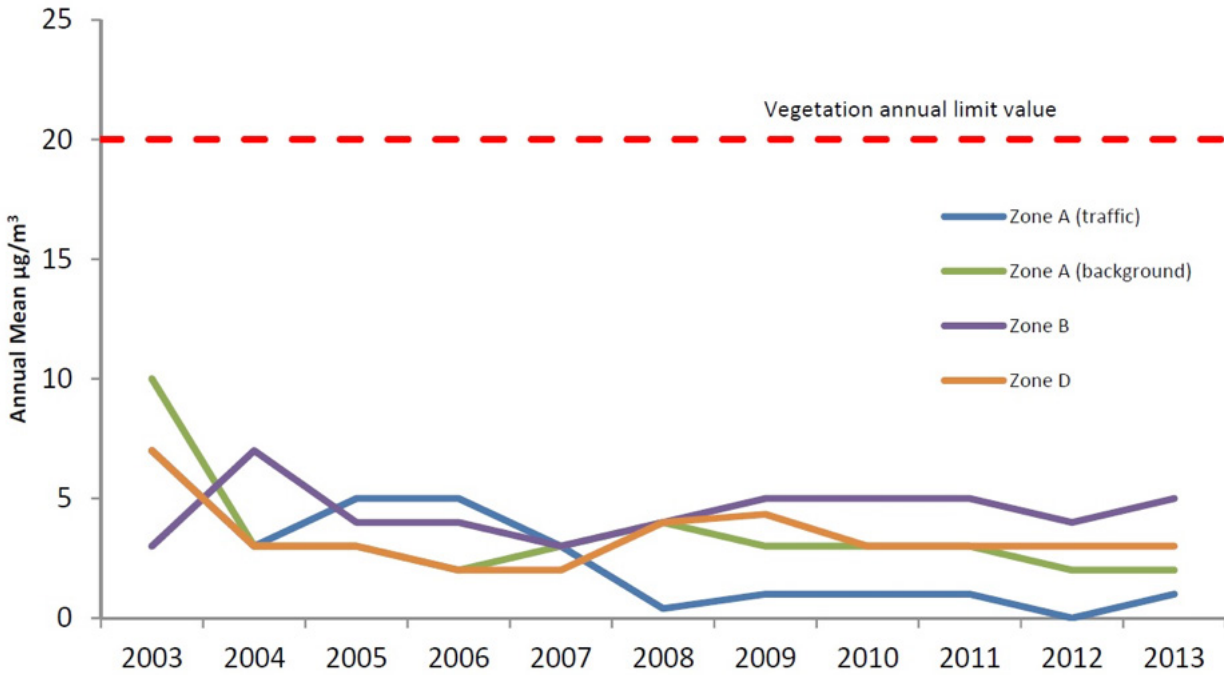
Source: Air Quality in Ireland 2012, Key Indicators of Ambient Air Quality (EPA, 2013)

Figure 4.4: Trends in Lead Levels in Ambient Air in Dublin 1988–2012



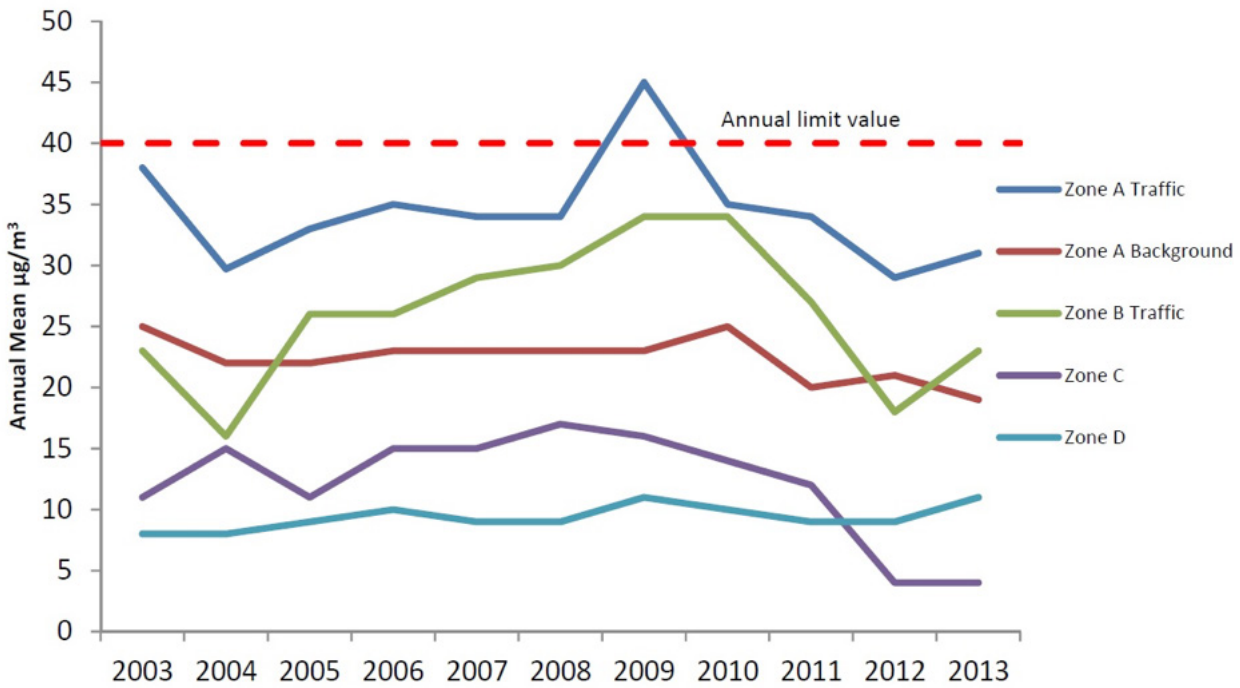
Source: Air Quality in Ireland 2012, Key Indicators of Ambient Air Quality (EPA, 2013)

Figure 4.5 National Trends in Sulphur Dioxide Levels in Ambient Air 2003–2013



Source: Air Quality in Ireland 2013, Key Indicators of Ambient Air Quality (EPA, 2014)

Figure 4.6 National Trends in Nitrogen Dioxide Levels in Ambient Air 2003–2013



Source: Air Quality in Ireland 2013, Key Indicators of Ambient Air Quality (EPA, 2014)

most readily exposed, and they present a considerable risk in terms of their potential to contribute to breaches in air quality standards in areas subject to heavy traffic. Although the emissions from individual vehicles will continue to fall as a result of technological advancements and cleaner fuel, improvements in the case of NO_x have to date largely been offset by the increase in the number and size of vehicles on the road; diesel engines in general tend to emit more NO_2 (EPA, 2013).

Emissions from the transport sector are the main, but not the only threat to air quality in the Dublin region. Other issues include the construction industry (and in particular cement production), uncontrolled burning of waste and localised emissions from a small number of industries.

According to the EPA's fifth State of the Environment Report published in 2012:

'Across Europe the most problematic pollutants have consistently been NO_x , PM and ozone. Recently polycyclic aromatic hydrocarbons (PAHs) have also been identified as a pollutant of concern.'

' NO_2 levels across Ireland have remained relatively static since 2002; however, an increasing trend at traffic-impacted sites in Dublin and Cork is emerging.'

' PM_{10} concentrations show a decreasing trend in cities and large urban areas since 2003. This is mainly due to the decreases in particulate emissions from traffic arising from improvements in vehicle engine emissions. However, this decrease is not seen in smaller towns, where domestic solid fuel emissions are more significant than traffic emissions.'

'Under the CAFE Directive, Ireland requires a reduction in levels of $\text{PM}_{2.5}$ by 10% between 2012 and 2020. This reduction is challenging, as it will require an integrated approach across a number of sectors including industrial, transport and residential emissions.'

'Reductions in emissions from traffic and from domestic use of solid fuel are required to reduce ambient levels of PAHs.'

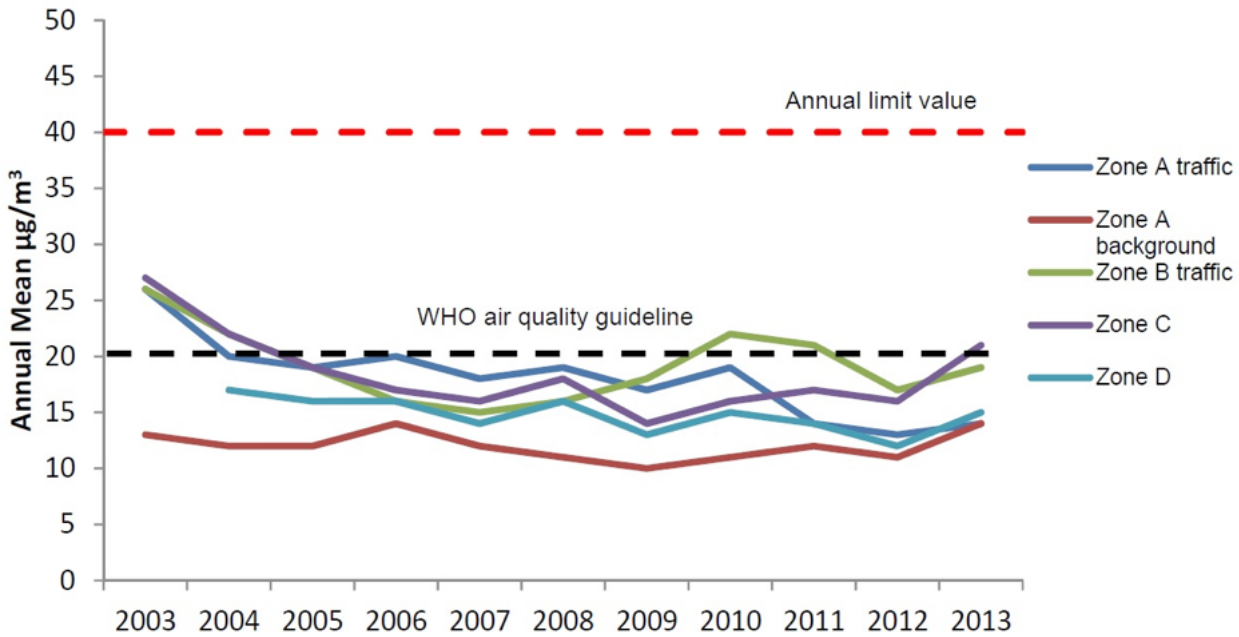
Dublin City Council and the other local authorities in the Dublin Region will update the Dublin Regional Air Quality Management Plan 2009–2012 which addresses air quality issues, including emissions from the transport sector.

An issue raised by the EPA in response to the consultation phase on the Air Quality Management Plan noted that: 'some climate change solutions can impact negatively on air quality with many biofuels having higher emissions of air pollutants than the conventional alternative. In particular, changing fuel from gas to wood can increase particulate emissions tenfold and also increase particulate emissions of dioxins'. The Development Plan should continue to be aware of this issue when considering climate change policies.

4.8.2 Noise

In general, low environmental sound levels can contribute significantly to the good health and quality of life for the population in Dublin city. Co-ordinated and sustained effort is required to protect those areas that have low environmental sound levels and to improve areas that are deemed to have undesirable high levels. The use and enjoyment of many natural resources, such as our green spaces and sea frontage

Figure 4.7: National Trends in PM₁₀ Levels in Ambient Air 2003–2013



Source: Air Quality in Ireland 2013, Key Indicators of Ambient Air Quality (EPA, 2014)

can be further enhanced through the preservation of low sound levels or the reduction in undesirably high levels, thus providing respite from the noisy ‘hustle and bustle’ often experienced in the busy urban environment.

There are a number of bodies that implement noise legislation. The Health and Safety Authority under the various pieces of health and safety legislation enforces noise in the work place legislation, which can impact on employees’ health. Noise in the environment that has the potential to cause nuisance/annoyance comes within the remit of Environmental Protection legislation. The Environmental Protection Agency Act 1992, Sections 106, 107 and 108 – and can be enforced by the local authorities. Environmental noise, which

is all around us, can arise from many sources, such as traffic, industrial activities, rail, and aircraft. The Environmental Noise Directive (2002/49/EC) requires that action is taken by each member state with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserving environmental acoustic quality where it is good.

There are no limits on permissible or impermissible sound exposure levels set down in Irish statute law in relation to environmental noise outside of the work place. However, there are standards produced by other countries which are used, such as the Calculation of Road Traffic Noise (Welsh Office). References are often made in relation to World Health Organisation (WHO)

Guidance for the protection of human health against environmental noise exposure. In 2011 the WHO published a report indicating that exposure to environmental noise has adverse impacts on human health (Burden of Disease from Environmental Noise, 2011). Industrial Pollution, Prevention and Control licenses (IPPC licenses) issued by the Environmental Protection Agency normally contain specific limits in relation to the sound levels produced by the industrial process at the boundary of the industrial site.

Dublin City Council, in its Noise Action Plan, has defined areas with undesirable high sound levels as areas with a night-time level greater than 55 decibels and a day-time level greater than 70 decibels. It has defined areas with desirable low sound levels as areas with a night-time level less than 50 decibels and/or a day-time level less than 55 decibels. It also has defined a 'Quiet Area' as: (a) an area exposed to an absolute value of below 55 decibels day-time and below 45 decibels at night-time; (b) an area perceived as 'Relatively Quiet'. These types of locations will be defined by their proximity to areas of high sound levels.

Having revised the Dublin Agglomeration noise mapping in 2012, the four local authorities in the Dublin Agglomeration (Fingal, Dublin city, Dún Laoghaire-Rathdown and South Dublin) also reviewed and revised the Noise Action Plan 2008–2013. The revised plan came into effect in December 2013 as the Dublin Environmental Noise Action Plan 2013–2018, prepared in accordance with the requirements of Environmental Noise Regulations S.I. No. 40 of 2006. These regulations give effect to the Environmental

Noise Directive (2002/49/EC) relating to the assessment and management of environmental noise. See **Figure 4.6** for noise levels mapped in the Dublin area. In summary, the following was observed for Dublin city:

- Of the 527,612 people living in the Dublin City Council Area, 58% of people are exposed to noise levels greater than 55 dB (A) Lden, reducing from 100% in 2008. Railway, industrial, and aircraft noise does not have a major impact on overall noise levels.
- The number of people exposed to the desirable night-time noise levels less than 50 dB (A) has increased from 1% in 2008 to 69% in 2012. 24 hour (Lden) sound levels from traffic do not drop below 55 decibels.
- The number of people exposed to the undesirable night-time levels above 55 dB(A) has reduced from 58% in 2008 to 24% in 2012 with approximately 0.04% currently exposed to night-time sound levels above 70 dB(A), i.e. 200 people.
- 47% of the population are exposed to sound levels from traffic sources above the desirable day time level of 55 dB (A) with 5% exposed to day time sound levels above 70 dB (A), i.e. 26,100 people.

Population exposure statistics from sound from traffic sources on all roads can be found in **Table 4.5**.

Table 4.5: Population Exposure to Traffic Noise

Decibels dB (A)	Lden Number People Exposed	Lden % People Exposed	Lday Number People Exposed	Lday % People Exposed	Lnight Number People Exposed	Lnight % People Exposed
<55	17,100	3%	24,400	5%	364,500	69%
50-54	206,700	39%	255,900	49%	38,800	7%
55-59	141,800	27%	98,600	19%	69,000	13%
60-64	38,700	7%	48,600	9%	47,500	9%
65-69	72,800	14%	74,000	14%	7,600	1%
70-74	48,400	9%	25,400	5%	200	0%
>75	2,100	0%	700	0%	0	0%

In assessing household noise exposure levels the decision support matrix, as set out in the Noise Action Plan, shows that 53.4% (130,398) of residential properties in the Dublin City Council area have been identified as having a score of 17 or greater, thus suggesting priority action should be considered. This compares to the percentage in the previous Noise Plan (2003–2013) of 6.1%. The 53.4% is broken down as follows:

- a. 52.9% (129,284) of properties are in quiet areas with exposure to low sound levels; and
- b. 0.5% (1,114) of properties are exposed to high sound levels. This equates to potential annoyance from high sound levels for approximately 2,130 people. This represents a significant improvement, with a decrease of 62.7%, since the previous Noise Plan.

For the Dublin City Council area, movement from the priority action status to a lower status equates to a positive benefit, estimated between €27,850 to €139,250 per year – using the value of €25 per dB (Lden), per household per year. This will result in an estimated positive benefit of between €55,700 – €278,500 over the period of the plan.

According to the Noise Action Plan 2013–2018, the recreational open spaces available to the city's population are comprised of approximately: 120 large open spaces, 260 playing fields, 120 playgrounds, 88 public parks (including open spaces and gardens), 4 beaches, 2 nature reserves, 1 main river and its associated boat clubs and walks and 2 canals. There are also: 128 places of worship, 69 hospitals and nursing homes, 216 educational institutions and 396 childcare facilities. Again using the decision support matrix for noise exposure, all of the former have been found to have a score of less than 17, indicating priority action is not required. This represents a significant improvement since the last Noise Action Plan where 111 such areas had a score of greater than 17.

The Noise Action Plan sets out proposals and actions in relation to reducing noise where necessary and maintaining the environmental acoustic quality where it is good. The first year of the Noise Action Plan (2014) aimed to continue the implementation of the previous Noise Action Plan 2003–2013, to make the results of the noise monitoring network available to the public and to identify areas of priority action from noise mapping. Subsequent phases of the current plan include identifying more quiet

areas and submissions for ministerial review, review planning guidance and a produce a programme of actions, to capture further noise data, to review the impact of the plan and amend as appropriate.

The most recent annual report published by Dublin City's Air Quality Monitoring and Noise Control Unit in 2013 indicates noise complaints steadily rising over the years to peak in 2004 with 688 complaints. There has been a continual decrease year on year since then to 448 complaints in 2013. The majority of complaints in 2013 related to the general commercial activities followed by commercial music complaints, complaints related to construction.

4.8.3 Existing Environmental Issues Relating to Air Quality and Noise

The following broad range of issues has been identified, which include localised as well as more strategic issues:

- The effect of transport sector on air quality – results from air quality monitoring indicate that compliance with stringent new PM₁₀, PM_{2.5} and NO₂ standards may present problems in urban areas where there is heavy traffic.
- Impacts on residents from excessive noise uses, e.g., related to commercial activities, and complaints related to construction.
- Requirements of the 'Dublin Regional Air Quality Management Plan' to be taken into account.
- Implementation of the 'Dublin Agglomeration Action Plan relating to the Assessment and Management of Environmental Noise.'

4.9 Climatic Factors

4.9.1 International

Ireland is a signatory to the Kyoto Protocol (1997) and the later (2008) EU Climate and Energy Package, and under these, has committed to reduce carbon emissions from the domestic economy. The Intergovernmental Panel on Climate Change has concluded that human actions and activities are influencing the climate leading to warming of the oceans and atmosphere. The effects of climate change can manifest through flooding, increased precipitation, water shortages, changes to species distributions and extreme weather events becoming more common. There is a need to both mitigate the impact of the city's activities on climate and to adapt to climate change.

Under the Kyoto Protocol, Ireland has agreed to limit the net growth of greenhouse gases (GHGs) to 13% above its 1990 levels, which was established and set at 55.61 Mt of CO₂eq. The EPA has produced provisional estimates for the period 1990–2013 to meet legal reporting obligations and for submission to the European Commission in the first quarter of 2015. For 2013 Ireland's emissions were estimated at 5% above 1990 levels, or 57.81 Mt CO₂eq.²

The year 2013 was also the first year of the second commitment period for the Kyoto Protocol, known as the Doha Amendment, for the period 2012–2020. The EU and its member states with Iceland decided to fulfil its commitments under this amendment; Ireland's compliance during from 1990–2020 will be assessed at the end of the commitment period, based on its GHG submission in 2022.

² Ireland's Provisional Greenhouse Gas Emissions for 2013 (EPA, 2014)

Figure 4.6 Dublin City Noise Mapping (24-hour Lden and Lnight)



Source: Dublin City Council

4.9.2 European

Under the EU's 20-20-20 Agreement, for the period beyond 2012 the EU Councils of Ministers have agreed to an ambitious target of 20% reduction on 2005 GHG emission levels for sectors outside the Emissions Trading Scheme (ETS) under the European Union's Effort Sharing Decision (Decision 406/2009/EC). Ireland's target is to reduce non-ETS emissions by 20% by the year 2020. The two main directives which set about achieving this target are the Energy Efficiency Directive (2012/27/EC) and the Renewable Energy Resources (RES) Directive (2009/28/EC).

4.9.3 National

The National Climate Change Strategy incorporates Ireland's international commitments into a range of actions that take into account commitments from government papers such as the White Paper on Delivering a Sustainable Energy Future and the National Bioenergy Action Plan. There are numerous other directives that will have positive effects on climate change that part of the government's national renewable energy strategy for 2012–2020 such as the National Energy Efficiency Action Plan and the National Renewable Energy Efficiency Action Plan, under which a target was set by the EU for 40% of electricity in Ireland to come from renewable sources by 2020. In April 2014 the Government also published a National Policy Position on Climate Action and Low-Carbon Development which set out, inter alia, a long-term vision of low-carbon transition including an aggregate reduction in CO₂ emissions.

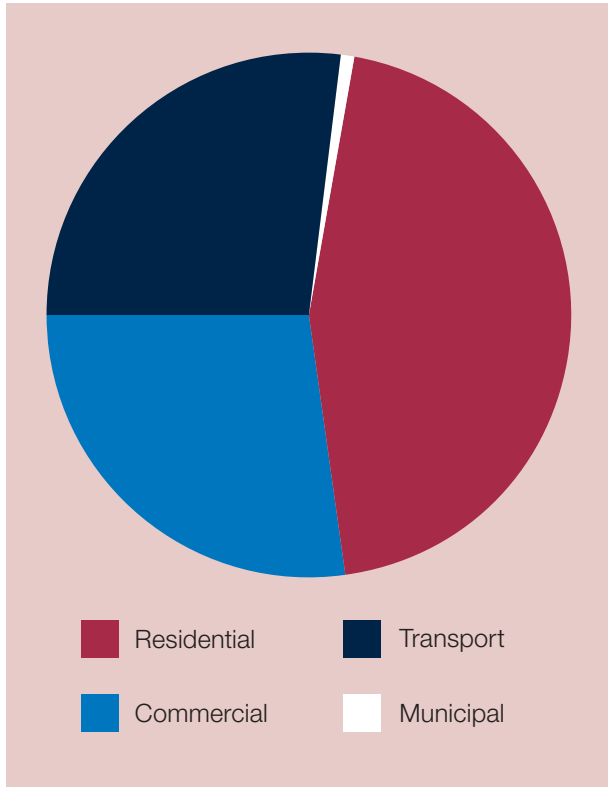
4.9.4 Local – Dublin City

The National Climate Change Adaptation Framework, published in 2012 by the

Department of the Environment, Community and Local Government, requires local authorities to prepare local adaptation plans as part of the Development Plan process. These plans are intended to reduce adverse impacts to climate by taking an interdisciplinary approach to influencing key factors at a local level, e.g., through energy usage, transport and green infrastructure. In May 2008 Dublin City Council adopted a Climate Change Strategy that set ambitious targets for the city toward 2020. In May 2009 the Lord Mayor of Dublin signed the EU Covenant of Mayors under which 500 European cities aim to go beyond the EU 2020 targets of a 20% reduction in GHGs. Codema as Dublin City's energy authority, and in association with Dublin City Council, produced a Sustainable Energy Action Plan (SEAP) for the period 2010–2020 and monitors sustainability indicators to track progress. The aim of the plan is to reduce the city's energy consumption by 33% and associated emissions by 20%, by 2020. Codema's Monitoring and Progress Report on the SEAP noted that Dublin city is on track to meeting the 33% energy reduction target according to the Sustainable Energy Authority of Ireland's benchmarking system.

Dublin city encourages generation and use of sustainable energy and the council works continuously with Codema on projects that aim to reduce energy use. The council also works with communities and universities on pilot projects, such as the EU-assisted TURAS project (Transitioning Towards Urban Resiliency and Sustainability).

Figure 4.7: Proportion of Energy Consumption Per Sector for Dublin City 2011



4.9.5 Current Environment

As part of this process of preparing the SEAP 2010–2020 for Dublin City, it was necessary to estimate the energy consumption and associated CO₂ emissions for the Dublin City Council area. The baseline was originally calculated on census data from 2006 and has since been updated by Codema’s assessment of the plan in the Sustainability Action Plan – Monitoring and Progress Report 2014. The assessment uses data from 2011 as this year had the most in-depth and detailed data, mainly due to the 2011 census. The baseline for 2011 was thus calculated showing the proportion of energy usage between four sectors: Residential (45%), Commercial (27%), Transport (27%) and Municipal (1%). See **Figure 4.7**.

Waste and agriculture are not big emitters within the city boundaries. In 2011 Dublin City (11.5% of the national population), released approximately 2.95 million tonnes of CO₂. On average, a Dubliner released 5.6 tonnes of CO₂ per year, less than the national average of 12.6 tonnes in 2011 (CSO Environmental Indicators, 2014). Overall, CO₂ emissions dropped significantly by 43% over the period 2006–2011, mainly due to changes in fuel usage and decreases in emissions from the electricity grid. This puts Dublin more in line with other peer cities such as London (4.9t CO₂ per capita). Dublin city in 2011 consumed 10.14 TWh of primary energy per year (compared to 22.0 TWh in 2006), in the form of electricity, oil, natural gas and renewable energy.

In terms of more recent calculations of energy consumption, as part of Dublin city’s Sustainability Report for 2013, Codema estimated the city’s energy usage (in terms of megawatts/hour/capita) decreased approximately 18% in the period 2006–2011. Additionally, in 2013 Dublin City Council a major emergency plan which sets out co-ordinated systems for responding to emergency situations caused by severe weather, e.g., major fires. This is intended to improve the city’s resiliency to a changing climate and to help mitigate adverse effects.

4.9.6 Monitoring Information

With the adoption of the Dublin City SEAP, there is a framework in place to monitor CO₂ emissions from several activities. In addition, it is good practice to update the baseline data on a periodic basis.

4.9.7 Non-implementation of the Development Plan

As outlined in the SEAP for Dublin City, a ‘business-as-usual’ approach to climate change is not realistic, even in the short

term. Codema's projections under this scenario show a steady predicted rise in CO₂ levels if no further mitigation actions were implemented, which runs counter to climate change strategies.

4.9.8 Existing Environmental Issues Relating to Climatic Conditions

The following broad range of issues has been identified, which include localised as well as more strategic issues:

- Best practice methods for energy efficiency, energy conservation and water conservation, e.g., district heating network, combined heat and power systems, energy efficiency.
- Continued regard to the Sustainable Energy Action Plan.
- Feasibility of renewable energy sources throughout the city.
- Further reductions in CO₂ emissions required.
- Rising sea levels.
- Pluvial (rainfall) and coastal flood risk from changing land-use patterns and climate change.
- Importance of city vegetation/landscape to act as a carbon sink.
- Pressure from transport-related emissions.
- Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to these shared regional issues set out.

4.9.9 Landscape and Soils

4.9.9.1 Landscape

The city landscape consists of the public and private landscape of the city. It fulfils an array of environmental, ecological, social, recreational and aesthetic functions of the developing city.

The modern city has developed over the original natural landscape of the lower reaches of the river Liffey and the coastline. Typically this would have included climax vegetation covering the relatively low-lying land around the Liffey and its tributaries. Over time the intervention of man has modified the original landscape initially through agriculture and then more widely through urbanisation. The growth of urban Dublin has not included comprehensive city-wide landscape planning so that today's format reflects the organic growth of the city through the years.

The city park system forms one of the most recognisable components of the modern city landscape. This has evolved primarily from lands that were originally in private ownership, such as the Phoenix Park and squares such as Mountjoy Square. Today opportunities for new parks are more restricted due to the almost complete development of the city administrative area, however, they do arise within redevelopment, e.g., docklands, and development densification, e.g., institutional land developing surplus lands. Dublin City Council currently manages approximately 1,400 hectares of public open space. The public landscape is under management control of the City Council, the Office of Public Works and other public agencies and is primarily composed of:

- Parks and golf courses;
- Transport corridor landscape (road and rail);
- Canals, rivers and coastline;
- Street trees and civic decoration; and
- Public housing/buildings/office landscape.

The private landscape is under the management of individuals, institutions and commercial entities and is primarily composed of:

- Private parks (e.g. Fitzwilliam Square);
- Institutional landscape (e.g. school grounds);
- Commercial landscape (e.g. private golf courses, shopping centres, hotels etc.); and
- Residential landscape (e.g. private gardens, apartment landscape).

4.9.9.2 Protection of the City Landscape

Growth and densification of urban areas requires the protection of its landscape, which can be lost or marginalised by development pressure. The following landscape specific measures currently apply:

This convention, which Ireland is a signatory to, aims to promote landscape protection, management and planning and to organise European co-operation on landscape issue. Ireland ratified the Landscape Convention in 2002 and it came into effect in 2004. Ireland, as a party to the treaty, is required to undertake general measures to recognise landscapes in law, establish landscape policies with

public participation and to integrate landscape into its existing policies, such as regional and town planning.

National Landscape Strategy

'The National Landscape Strategy for Ireland 2015–2025 will inform and assist the resolution of challenges arising from competing priorities in the landscape, for example: infrastructural provision versus landscape protection, or local versus national objectives. The actions of this Strategy will help support a living landscape, and strengthen community identity and will ensure that the landscapes of the future are as valued as the landscapes of the present and the past'.

The European Landscape Convention (Florence 2000)

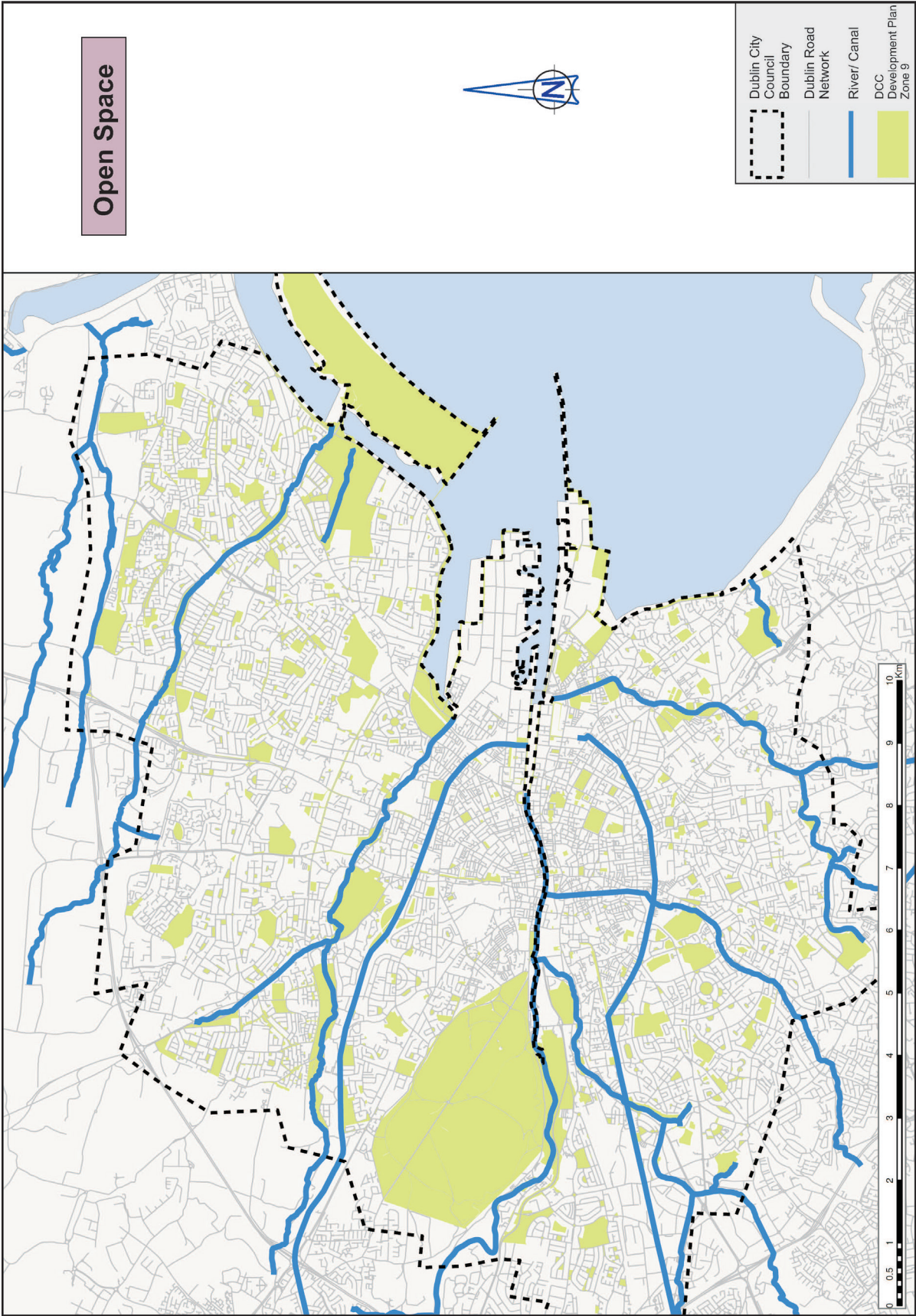
An implementation programme is included in the Landscape Strategy and will take place over the duration of the strategy period.

Development Plan

Development Plan land-use zonings that primarily relates to landscape protection are Z8 Conservation Areas, Z9 Amenity/Open Space and Z11 waterways, as shown in **Map 4.8**. Open space, however, is a component of other zonings permissible uses.

Height is also recognised as being an important part of the shape and structure of a city. Dublin city contains a range of buildings which add to its streetscape character. These range from Victorian terraces to modern office blocks, university campuses, Liberty Hall and the Alto Vetro building at Grand Canal Dock. The aim of the Development Plan will be to protect areas of character and historic centres,

Map 4.8



such as the Georgian squares, for example, while also providing for future development on the scale of six-seven storey buildings in the inner city and near public transport-heavy areas such as heavy rail and underground stations, with low-storey buildings in the rest of the city.

Landscape Conservation Areas

Landscape Conservation Areas (LCAs) can be made by order for the preservation of the landscape. There are no LCAs within the city administrative area. However, the Phoenix Park, the North Bull Island, the Botanic Gardens and St Anne’s Park are under consideration for this designation.

Environmental Impact Assessment

Landscape and visual impact assessment as part of EIA requirements for scheduled projects assesses the likely impact on landscape and visual baseline resources and propose mitigation measures to residual impact.

Tree Preservation Orders

Tree Preservation Orders can be made in the interest of amenity or the environment and allow for the protection of individual or groups of trees. There are currently three Tree Preservation Orders (TPOs) in the plan area, as outlined in **Table 4.6**: Darmouth Square, Ranelagh; Bettyglen Estate, Raheny; Goldenbridge, Inchicore. These trees have been designated due to their landscape, amenity and ecological value. The trees may only be removed if they are a risk to public health and safety or in the interest of design.

Table 4.6: Tree Preservation Orders in Dublin City Council Area

Location	Protected Trees
Darmouth Square, Ranelagh, Dublin 6	Group of Trees
Bettyglen Estate, Raheny, Dublin 5	Group of Trees
Goldenbridge, Inchicore, Dublin 8	Single Tree

Other non-landscape specific measures relating to architecture conservation, built structure conservation, conservation areas, natural habitats and wildlife also can bestow protection to the related landscape.

4.10 Evolution of Environmental Issues in the Absence of the Development Plan

The City Development Plan will build on the current Development Plan in promoting a city-wide planning approach to the city landscape as well as continuing the protection afforded to this resource. The balance between the 'built' component of a city and its 'landscape' component is an important indicator and it can be maintained or enhanced through the planning and development processes. The absence of the Plan would put the landscape under pressure from development with significant negative impacts to environmental, ecological, social, recreational and aesthetic attributes of Dublin.

4.10.1 Existing Environmental Issues Relating to Landscape in Dublin City

The following broad range of issues has been identified, which include localised as well as more strategic issues:

- Provision of an accessible public landscape that meets the perception and demands of a European capital city, in particular in the quality of planning and design of the public landscape.
- Creating landscape linkages within an urban fabric that has reached almost full development.
- Balancing competing demands or incompatible uses within the public landscape, such as between biodiversity and recreational uses.
- Provision of universal accessible facilities for users of public landscape.
- Promoting sustainable landscape solutions (e.g. green roofs, green walls, permeable pavement, SUDS) in the city landscape.

- Development and environmental impacts on public landscape (e.g. road noise, air quality and services).
- Changes in the private landscape through development and densification, from small-scale removal of front residential gardens for parking to larger scale changes in the landscape associated with institutional facilities when redeveloped.
- Protecting designated landscapes or elements of the landscape (e.g. urban trees).
- To ensure that opens space amenities including the natural environment are connected as main features of the city's character and to align with the city's wider Strategic Green Network.

4.11 Soils and Geology

4.11.1 Soil Definition and Functions

Soil is defined as the top layer of the Earth's crust. It is comprised of mineral particles, organic matter, water, air and living organisms. It is an extremely complex, variable and living medium, which acts as the interface between the earth, air and water. Soil performs a number of key environmental, social and economic functions that are vital for life. It has a socio-economic and environmental role as a habitat and gene pool, a platform for human activities (including food production), landscape and heritage and as a provider of raw materials. Soil also functions as a carbon sink, as has other important ecological functions such as storing, filtering and transforming nutrients, species and genes. This vital resource is non-renewable, and measures for soil conservation are required to sustain its functions.

While the EU adopted a Soil Thematic Strategy in 2012, which set out the proposal for a Soil Framework Directive, in May 2014 the European Commission decided to withdraw this directive. The Seventh Environment Action Programme has asserted that degradation of soil is a serious problem, both for member states and globally. It is proposed that by 2020 all land in the EU should be managed sustainably and soils afforded protection, with remediation of contaminated sites also a priority.

At a national level, the National Soil Database (NSDB) produced, for the first time, a national baseline database of soil geochemistry, including data point maps and spatial distribution maps of major nutrients, major elements, essential trace elements, trace elements of special interest and minor elements. The National Soil Database project (2001-CD/S2-M2) has generated an archive of soils data based on a sampling campaign in Ireland from 2002 to 2005. However, the EPA has confirmed that none of the sites surveyed are within the administrative area of Dublin City Council.

The existing baseline of data on soils in Dublin city is being developed by the Geological Survey of Ireland, in co-operation with Dublin City Council. This work has been in progress since 2009 under the SURGE Project, which was completed toward the end of 2010, in order to highlight the importance of urban soils to environmental health in European cities. Under this Europe-wide initiative of the Geological Surveys of Europe, the Geological Survey of Ireland, in partnership with the Geological Survey of Norway, undertook systematic geochemical mapping of soils in the greater Dublin area in order to compile a baseline dataset of heavy metals

and persistent organic pollutants in Dublin's soils. Over 1000 samples were taken across the greater Dublin area, including the sampling of 368 points within Dublin city's public parks and open spaces.

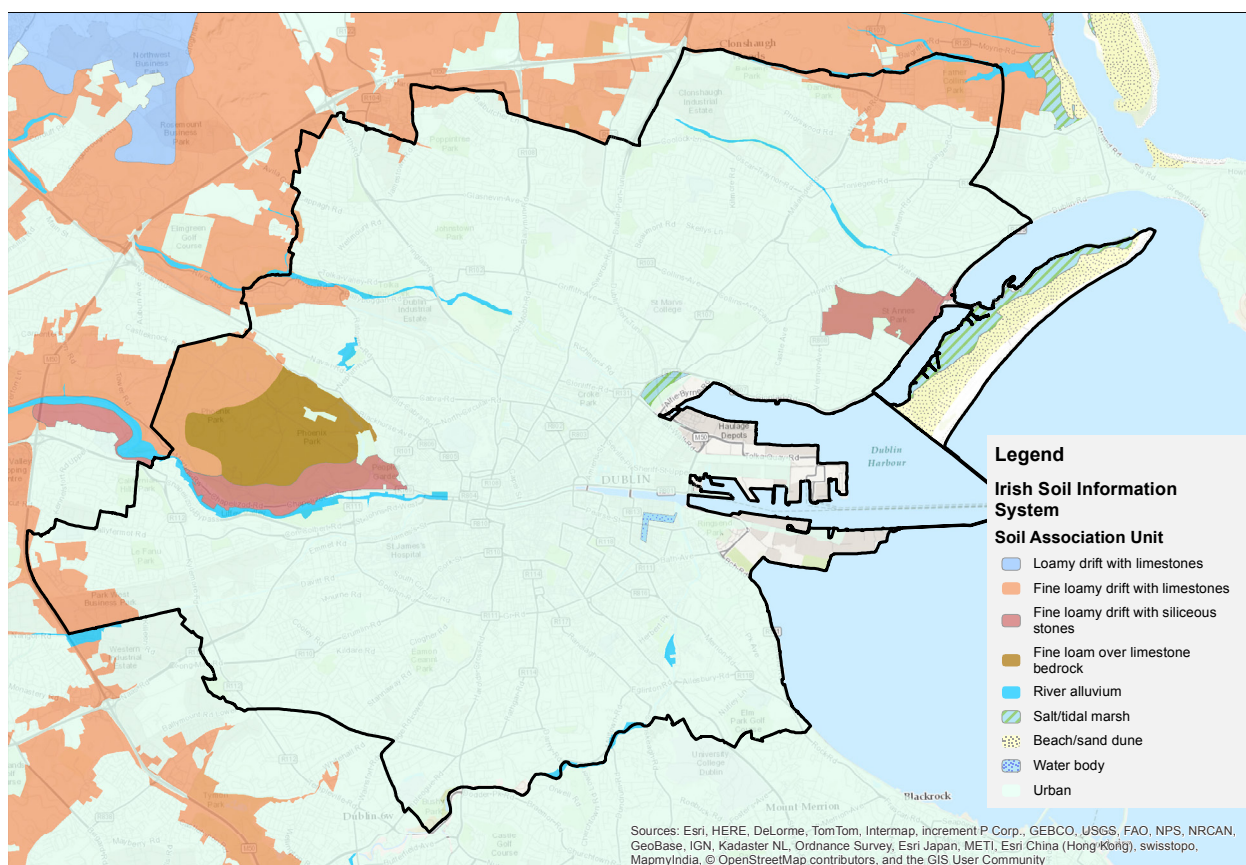
Results show that inner city soils typically have higher levels of potentially harmful elements and organic pollutants than areas towards the outer city; this is a pattern seen in many cities around the world and can be tied to historical industrial activities as well as fossil fuel burning and use of leaded paints and fuels. Polycyclic aromatic hydrocarbons (PAHs) are also present in the soil, reflecting historic coal burning and other historic industrial emissions, as well as more modern transport-related emissions. The presence of polychlorinated biphenyls (PCBs) is likely associated with historic industrial activities and paint particles in the soil.

The soil of Dublin is derived from glacial till of Irish Sea origin, with limestone and shale and is largely comprised of grey-brown podzols. Lighter-textured grey-brown podzolics are good all-purpose soils, while heavier-textured members are highly suited to pasture production, responding well to manurial and management practices. The coast of Dublin has a layer of alluvium overlying the topsoil, which is a result of the low-lying status of the city. This sequence of soils remains only in undisturbed areas of the coast. As Dublin is a very built-up city, much of the topsoil and alluvium have long since been removed.³

Teagasc, in conjunction with the EPA, launched the Third Edition Soil Map in 2014, part of the Irish Soil Information System, a project which combined traditional soil survey techniques with digital mapping in a GIS-based soil information system. Phase 1 of the project began in

³ Environmental Impact Statement, Sutton to Sandycove (S2S) Project.

Map 4.9



2008 and was completed in 2014, with Phase 2 progressing from 2015; this project provides valuable information on existing soils in the city. The majority of soils in Dublin city are characterised under the Soil Information System as 'urban' soils, i.e., soils that have been disturbed, moved and manipulated by human activities. Urban soils are generally overlain by a non-agricultural, man-made layer formed from mixing, infilling or contamination by industrial uses. At the fringes of the city, the soil is characterised as fine, loamy drift with limestones and siliceous stones, particularly underlying the Phoenix Park, with river and lake alluviums in the Tolka and Liffey valleys. See **Map 4.9** for the distribution and types of soils within the city.

4.11.2 Soils and Climate Change

The function of soils in abating climate change is particularly important in a regional context for cities such as Dublin experiencing rapid growth beyond city boundaries. The conversion of greenfield sites and sealing of soils can release CO₂ into the atmosphere and further reduce areas of 'carbon sinks'. Soils contain about three times the amount of carbon globally as vegetation, and about twice that in the atmosphere. Land use planning must target the use of brownfield sites. According to European Commission research, given that land use change is often driven by demand and short term economic revenues, the most realistic option for soil management strategies is to improve soil carbon stocks is to a) protect the carbon stocks in highly

organic soils such as peats, found mostly in northern Europe, and b) to improve the way in which the land is managed to maximise carbon returns to the soil and minimise carbon losses.⁴

4.11.3 Overview of the Geology

The landscape of Dublin has been largely defined by the bedrock formations of the area, with limestone to the north and granite to the south. The more easily solubilised, less resilient limestone has eroded gradually, leaving a well-defined bay. The bay is restricted to the north and south where the limestone meets more resistant rocks (granite to the south and shale and conglomerate to the north). The changes in the bedrock geology are fault-controlled to the south of the bay. A large fault, known as the Rathcoole Fault, forms the southern margin of the basin where there is an unconformity between the granite and the limestone. To the north of the bay, there is a natural succession from the muddy limestones to the north into the calp limestone around the area of Sutton Cross.

Much of Dublin is dominated by rocks of Carboniferous age. During the early Carboniferous period, the eastern part of Ireland underwent uplift and erosion. Following this, there was a period of general subsidence in the area. This subsidence permitted the sea to invade the lower ground from the south during the Carboniferous age. Continued subsidence resulted in shallow and then deeper marine sediments accumulating across most of Dublin city and the county. The depth of the

⁴ Climsoil Study: Review of Existing Information on the Interrelations Between Soil and Climate Change (2008), European Commission Climsoil Project, Alterra.

sea and type of seabed varied from place to place, as did the rate of sedimentation and so a variety of carbonate sediments were produced in the area.

The calp limestone, which covers most of Dublin, was deposited in the basins that formed over 300 million years ago. Thick sequences of muds and muddy limestones accumulated in the basins, sometimes showing graded bedding. The calp Limestone itself is comprised of dark grey, fine-grained, graded limestone with interbedded black, poorly fossilised shales.

Most of the Carboniferous rock, i.e., the limestone forms low ground and is covered by a thick layer of Quaternary (2.6 million years ago to present) sediments. The deposits along the northern section of the bay are predominantly sand overlying gravels and clay. As one moves towards the city centre, the depth of the deposits increases and depths of 10 m or greater of sands, gravels and estuarine muds have been recorded in Ringsend and East Wall.⁵

4.11.4 Quarries

There are no active quarries in Dublin city. There were small quarries that closed in the past 50-60 years in the outer city suburbs as housing expanded. These include sites at: Cabra (Quarry Road), Crumlin (Sundrive Park), Kimmage Road Lower, Kilmainham and Artane. Rockfield Park in Artane was named by residents after old quarry excavations on the site.

4.11.5 Landslide Hazard

Dublin city has a low landslide risk as

⁵ Environmental Impact Statement, Sutton to Sandycove (S2S) Project.

much of the city is, by its nature, has made ground. According to the Geological Survey of Ireland's landslide susceptibility mapping, the majority of the city has zero landslide susceptibility, with the risk rising to 'low' at the outskirts of the city and heading outside the administrative boundary. There are small patches of 'moderate' landslide susceptibility along the south-west edges of the Phoenix Park. There are no recorded landslides within the Dublin city boundary; the nearest recorded landslide was approximately 1.5km outside the city boundary at Diswellstown in 1990, at the Knockmaroon Glen Quarry.

4.11.6 Infilled/Reclaimed Land

A significant portion of Dublin City is built on reclaimed or infilled land. This reclamation began back in the eighteenth century. The North Docklands were reclaimed between 1717 and 1729. A 1 km stretch of land between the city centre and the river Dodder was reclaimed by Sir John Rogerson between 1917 and 1927. North Lotts and East Wall were reclaimed by the end of the 1750s. A bank was constructed along the present South Lotts Road by 1760. The area between these banks was gradually reclaimed together with adjoining areas of the Dodder estuary. The dry dock between the Grand Canal Dock and the Dodder was filled in 1918. Reclamation continued progressively in an easterly direction from the beginning of the nineteenth century.

Traditionally the material used for reclamation in Dublin included construction and demolition waste, waste topsoil and municipal and industrial wastes. For example, the East Wall Business Park EIS

outlined the composition of the layers of fill and subsoil in the area. The upper fill layer was reported to be between 4–6 m, overlying silt, gravel and stony clay, overlying boulders at a depth of 13m+. Bedrock was not encountered.

It was identified that any material excavated from this area may be contaminated. For example, Ringsend Park was originally a landfill site of unknown material and has only a thin layer of topsoil. The existing promenade along Strand Road was also infilled with landfill materials.⁶ Many of the city's parks were built over landfill sites, including Fairview Park and Tolka Valley Park.

4.11.7 Seveso Sites

Directive 2012/18/EU was adopted taking into account, amongst other factors, the changes in EU legislation on the classification of chemicals and increased rights for citizens to access information and justice. This Directive is known for convenience as the SEVESO III Directive.

Directive 2012/18/EU was transposed into Irish legislation through S.I. No. 209 of 2015 (Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015).

S.I. No. 209 of 2015 came into effect on 1 June 2015. For clarity, the SEVESO III Directive replaced the SEVESO II Directive (96/82/EC).

⁶ Environmental Impact Statement, Sutton to Sandycove (S2S) Project.

One of the requirements of S.I. No. 209 of 2015 is that the Health and Safety Authority shall advise the relevant planning authority of a consultation distance for a SEVESO III establishment, following the receipt of a notification from the operator, and shall periodically review and update the consultation distance as necessary.

In conjunction with the Health and Safety Authority (HSA), it is policy for Dublin city to implement the provisions of the Seveso II Directive and to 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 such sites.

Seveso sites are defined as industrial sites which, because of the presence of sufficient quantities dangerous or hazardous substances, must be regulated under the EU directive. If there are planning applications for development occurring within a certain distance of the perimeter of Seveso sites, the Health and Safety Authority (HSA) provides appropriate advice to the planning authorities in respect of development within a distance of these sites.

Due to the mixture of historic industrial land uses and land reclamation in Dublin,

there are some contaminated sites which can cause environmental problems. Much of this land is found in the Docklands area where there are a range of potential contaminants in the fill materials underlying the sites and in substances in current usage. Contaminated land requires appropriate remediation of the site prior to any development, ensuring there is no migration of contaminated material during remediation or measures to handle landfill gases. Seveso sites are categorised as Upper Tier or Lower Tier depending on the size of the site or quantities of dangerous/hazardous material present. In the Dublin City Council area there are 6 Upper Tier sites and 11 Lower Tier sites. A further two Lower Tier sites are located outside the Dublin City Council administrative area, but are within the consultation zone distance of lands within the city, which is the area where planning applications must be referred to the HSA and are within development distance of Dublin City. A list of the Seveso sites in Dublin City is given in **Table 4.7**.

Dublin City Council has prepared emergency plans (for Upper Tier sites) and standard operating procedures for dealing with Seveso sites in general.

Table 4.7: Seveso Sites in Dublin City

Upper Tier Sites	
Site Name	Address
Calor Teoranta	Tolka Quay, Alexandra Road, Dublin 1
Dublin Waste to Energy Ltd.	Pigeon House Road, Dublin 4
Esso Ireland Ltd.	Dublin Joint Fuels Terminal, Alexandra Road, Dublin 1
Fareplay Energy Ltd.	Alexandra Road, Dublin 1
Indaver Ireland Ltd.	Tolka Quay, Dublin 1
Tedcastles Oil Products	Yard 2, Promenade Road, Dublin 3
National Oil Reserves Agency	Ringsend Oil Storage, Pigeon House Road, Ringsend, Dublin 4
Lower Tier Sites	
ESB Poolbeg Power Station	Pigeon House Road, Ringsend, Dublin 4
ESB North Wall Generating Station	Alexandra Road, North Road, Dublin 1
Iarnród Éireann Inchicore	Inchicore, Dublin 8
Iarnród Éireann Dublin Port	Alexandra Road, Dublin 1
Tedcastles Oil Products	Yard 1, Promenade Road, Dublin Port, Dublin 3
Topaz Energy Ireland Ltd. (Irish Shell) Site 1	Alexandra Road, Dublin 1
Topaz Energy Ireland Ltd. (Irish Shell) Site 3	Alexandra Road, Dublin 1
Utility Operations & Maintenance Services Ltd. Dublin Bay Power Plant	Pigeon House Road, Ringsend, Dublin 4
Sites Outside Dublin City Council Boundary but within Consultation Distance of DCC	
Lower Tier	
BOC Gases Ireland Ltd.	Bluebell Industrial Estate, Dublin 12
Kayfoam Woolfson	Bluebell Industrial Estate, Dublin 12

4.11.8 Areas of Geological Interest

According to the Geological Survey of Ireland (GSI), Geological Heritage Areas (GHAs) in Dublin City include:

- North Bull Island – a sandy barrier island, representing a continuously evolving sand spit; and
- Dodder river valley – lower Carboniferous sections at Smurfits, Clonskeagh and Donnybrook Mills sites.

As well as GHAs, there are a number of County Geological Sites (CGCs) in Dublin city and these are listed in **Table 4.8**. CGCs represent sites of particular local or national geological importance and are adopted under the National Heritage Plan; however, these sites are not covered by the statutory protection of Natural Heritage Areas. CGCs represent important aspects of geological heritage conservation. **Map 4.10** outlines the locations of geological heritage in Dublin city.

Table 4.8: County Geological Sites in Dublin City

Site Name	Summary Description
51 St Stephen's Green	A demonstration set of Irish marbles
Glasnevin Cemetery	The rocks used in gravestones and memorials are of many different types and ages
General Post Office (GPO)	The interior hall for customers is heavily panelled with Irish marbles
Guinness Wells	Two borehole wells dug within the Guinness Brewery complex
Museum building (Trinity College)	The museum building of Trinity College Dublin, especially the original interior
North Bull Island	A sandy barrier island truncated at the southern end by a breakwater running out from Clontarf
Oscar Wilde statue	A life size statue of Oscar Wilde, on Merrion Square, made of sculpted rocks, placed on top of a very large boulder of quartz
Phoenix Park	Deglacial landscape; sand and gravel hillocks and meltwater channels
River Dodder	A weir built on natural exposures of thick limestone beds in the channel of the river Dodder
River Poddle	The river flows across low permeability glacial till, most of its course has been diverted underground
Temple Bar street well	A historic street well

Source: Geological Survey of Ireland and Dublin City Council Geological Heritage Audit (2014)

4.11.9 Protection of Soils and Geology

4.11.9.1 Pesticides Framework Directive

The Pesticides Framework Directive (2009/128/EC) controls the storage, use and disposal of pesticides to minimise risk to health and environment from their usage. The directive includes measures which relate to soil management strategies in land use planning:

- Soils as media for pesticides to travel through and knowledge of the 'fate and behaviour' of specific pesticides in soils with regard to persistence in soils;
- Use of soil treatment products to be included in controls;
- Soil as part of the environment receiving impacts and effects on biodiversity; and

- Knowledge of soil types before determination of buffer zones.⁷

4.11.9.2 Habitats Directive (1992/43/EEC)

Soil types are included for many of the habitats listed under Annex I of the Habitats Directive as they influence the range of vegetation types associated with them. Soil is also a living resource. It is one of the most diverse habitats on Earth and contains one of the most diverse assemblages of living organisms. Soil organisms have important effects not only on soil properties but also on the functioning of the ecosystem.⁸

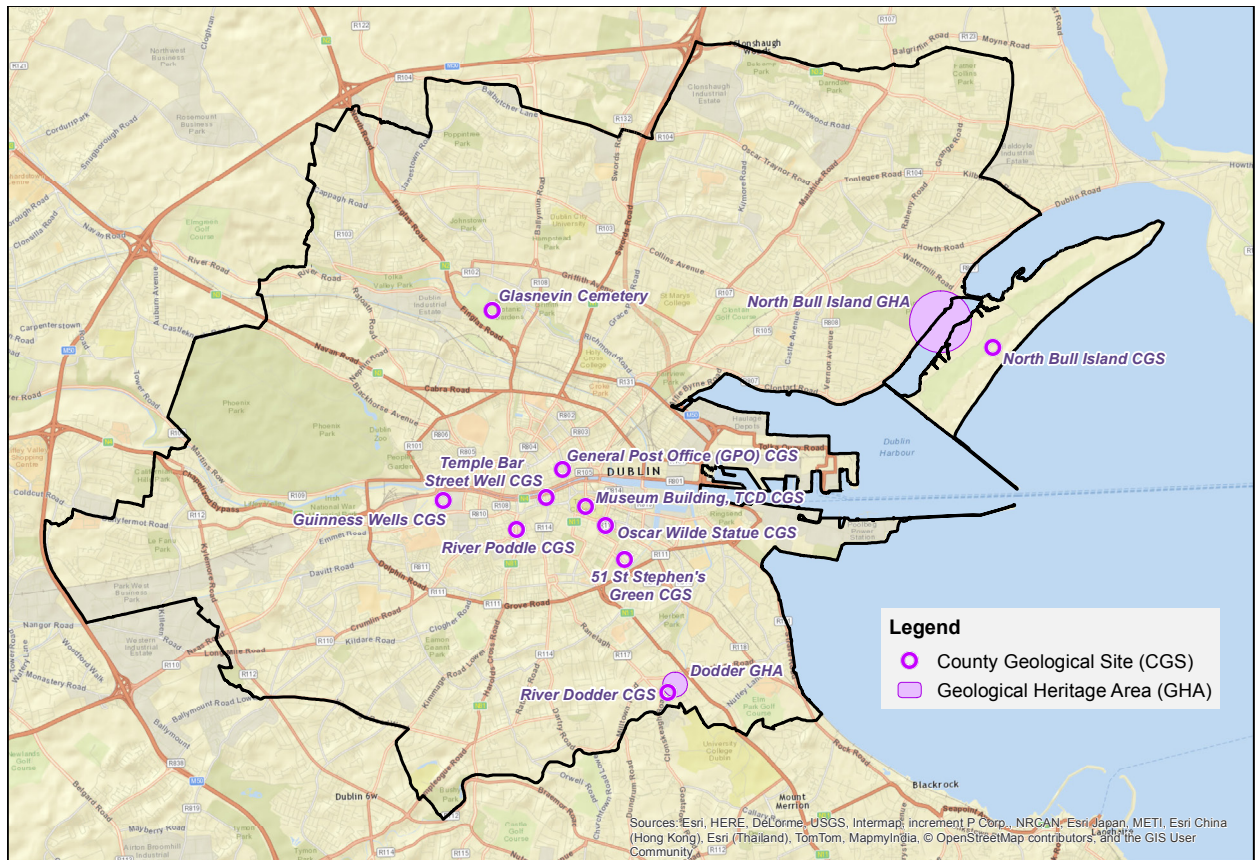
4.11.9.3 Water Framework Directive (2000/60/EEC)

The Directive includes issues related to soil

⁷ Framework for Community action to achieve a sustainable use of pesticides (2009), European Commission.

⁸ SEA Practical Guidance for Practitioners on How to Take Account of Soil (2009), Scotland and Northern Ireland Forum for Environmental Research.

Map 4.10



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

such as increased siltation in waterways and water contamination.⁹

Disturbance of contaminated soils in urban areas, especially historic contamination sites, could result in potential for increased water pollution, as many pollutants, e.g., heavy metals, pesticides, are bound to organic matter.

4.12 Relevant Objectives, Policies and Plans

4.12.1 Biodiversity Action Plan (2008–2012)

The Biodiversity Action Plan is described in **Section 4.5.2**. It includes specific actions with regard to geology and geomorphology:

⁹ SEA Practical Guidance for Practitioners on How to Take Account of Soil (2009), Scotland and Northern Ireland Forum for Environmental Research.

- Collation and collection of information;
- Raise awareness and make information available; and
- Protection and enhancement measures, including protection from inappropriate development.¹⁰

4.12.2 Dublin City Council's Guidelines for Open Space and Development Taking in Charge (2009)

Dublin City Council's Parks and Landscape Services Division issues guidelines, which include required measures for addressing soil compaction, quality assurance and storage of soils. Dublin City Council's policy is that existing topsoil is viewed as

¹⁰ Dublin City Biodiversity Action Plan 2008–2012. Dublin City Council.

a resource to be valued and managed in accordance with the council's Biodiversity Action Plan and sustainable development practices.¹¹ These policies have been adopted with a view towards adequate protection of the soil resource.

4.12.3 Influence on Soils and Geology in the City

The level or scale of a project may have less importance for soils and geology, as relatively minor interventions can have direct effects on contamination of sites, for example. A policy of strategic management will guide practices on a site by site basis.

Any key projects that involve development of greenfield sites will be of greatest concern for strategic management of soils. The Clongriffin-Belmayne (North Fringe) Area Action Plan (2012–2018) is an example of this and involved conversion of agricultural lands to new housing and commercial settlement. Issues here are those associated with soil sealing, soil structural degradation and compaction, loss of organic matter, and soil erosion.

A significant issue for soils is the removal of high-quality existing soils by developers and replacement with poor-quality fill. Good-quality soils are a commodity in urban areas and existing soils within the administrative area of Dublin city should be re-used within the locality, in the interests of retaining biogeographical characteristics of soils, such as soil types, seeds and organisms within native soils and habitat values. The transport of soils should be minimised also in the interests of sustainability.

Roads and infrastructure projects such as the Sutton to Sandycove project and proposed Eastern by-pass route will have

potential impacts on coastal erosion, disturbance of potentially contaminated soils, soil replacement/infill and alteration of sedimentation. The proposed Swords/Airport to city centre transport corridor would involve considerable disturbance, development of greenfield sites, soil cutting/removal, reinstatement and alteration of drainage.

4.12.4 Evolution of Problems in the Absence of the Development Plan

The Dublin City Development Plan 2016–2022 will include measures for the protection and management of soils. It will strengthen the development of soil management strategies for future developments. This includes the encouragement of re-development of brownfield sites and remediation of soils which are contaminated or compacted. It will support measures for protection of soils and their habitats and mitigation of impacts of construction and development. The development of strategies for green infrastructure will ensure that soil permeability is maintained at levels required for drainage and ecosystem functions. In the absence of the plan and its proactive policies, it is likely that further damage could be done to soils and geology of greenfield sites, in particular, and that management and remediation of brownfield sites would be limited.

4.12.5 Existing Environmental Issues Relating to Soils and Geology

- The following broad range of issues has been identified, which include localised as well as more strategic issues:
- Existing contaminated grounds due to historical or industrial activities at some sites (e.g. vitriol plants, glass manufacture, iron works, fertiliser plants etc.).

¹¹ Guidelines for Open Space and Development Taking in Charge. Dublin City Council (2009).

- Contaminated soils may place technical or financial pressures on development.
- Potential increased flood risk from changed land use patterns, climate change and predicted sea rise level could result in loss of soil organic matter through erosion and alteration of levels.
- Increased volumes of surface water run-off due to conversion of permeable landscapes to impermeable causes increased flooding, erosion and alteration of soils and their associated habitat.
- Lack of protection and mitigation of impacts of construction on soils, causing soil structural degradation and compaction.
- Replacement of existing soil with inferior soil or soil contaminated with invasive species due to improper land management practices.
- Release of contaminants bound to organic matter in soils due to disturbance, dredging and removal of soils.
- Contamination of soils by improper storage of materials, pesticides and waste.
- Direct contact, inhalation and ingestion of contaminated soils and uptake through plants causing adverse effects on human health.
- Reduced water-holding capacity through compaction by construction, causing increased risk of erosion and flooding.
- Damage or loss of the historic environment (e.g. cultural soils).
- Reduced groundwater re-charge and loss of supply and quantity to surface waters by increased soil impermeability from development.
- Changes in hydrological regimes of rivers by increased soil impermeability from development.
- Recreational uses can result in pressures on soils and their habitats, including erosion.
- Alteration of catchments of rivers can result in increased erosion, loss of sediments downstream and in coastal environments.
- Transboundary effects of air pollution from elsewhere in Europe could lead to soil contamination/acidification due to alteration of climate and weather patterns.
- Increases in extreme rainfall events leading to increased soil erosion.
- Effects on foundations of built infrastructure by increased erosion.
- Continued co-operation with the drainage division to further Dublin City Council objectives for sustainable urban drainage systems (SuDs) for public open spaces in existing and future developments.
- Use of Flood Risk Assessment for projects where erosion is a potential impact.
- Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to these shared regional issues set out in RPGs and subsequent reviews of the Guidelines.

4.13 Water

The European Union Water Framework Directive required that all natural waters achieve 'good ecological status' by 2015. The catchments within the Dublin City Council administrative boundary fall within the Eastern River Basin District (ERBD).

Environmental objectives and the measures needed to achieve them are set out in the River Basin Management Plan for the Eastern River Basin District (ERBD). Parts of five river sub catchments (or water management units) of the ERBD fall within Dublin City: Cammock, Santry/Mayne/Sluice, Liffey, Dodder and Tolka.

The first plan, and accompanying environmental report, was published in 2009. Preparation of the updated plans and programme of measures for the next cycle of river basin management plans, covering the period 2015v2021, has been delayed and updated river basin management plans are intended to be delivered in the second half of 2017. See **Plate 4.1** detailing the Eastern River Basin District boundary. In parallel, the Minister for the Department of Communications, Climate Action and Environment has put in place new government and management structures for the implementation of the next cycle of river basin management plans, which will serve to better deliver the requirements of the Water Framework Directive. One of the results of this will be the consolidation of the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts into one national RBD.

Under the new RBMP arrangements, at 'Tier 1' the Minister for the Department of Communications, Climate Action and Environment will refine and finalise the next iteration of the RBMP and programme of measures; at 'Tier 2' the EPA will be responsible for drafting environmental protection objectives, undertaking catchment characterisation and producing a common programme of measure for local authorities; the local authorities will operate at 'Tier 3' which will involve implementation and enforcement of the new RBMP.

Dublin city has river water bodies monitored under the WFD: including the Liffey, Tolka, Santry, Dodder and Camac rivers. Dublin city also has four transitional waterbodies (estuaries) – the Upper and Lower Liffey estuary, the Tolka estuary and North Bull Island Estuary. The entirety of Dublin city's coastline falls within the Dublin Bay coastal water body. There are two groundwater bodies; there are no lakes within the city.

4.13.1 Water Services Strategic Plan

The Water Services Act 2014 provides that the water services authority makes a Water Services Strategic Plan (WSSP) with regard to the provision of water services. As such, Irish Water, as the national water service utility for Ireland, has developed a Water Services Strategic Plan for the next 25 years. The plan covers a number of key themes, including:

- Customer service;
- Provision of clean and safe drinking water;
- Protection of human health and the environment;
- Managing wastewater; and
- Support proper planning, sustainable development and economic growth.

The priorities for Irish Water under the WSSP are the delivery of improved and affordable water services, remediation of existing water quality problems, e.g., boil notices, complying with the Urban Wastewater Treatment Directive, reduction of leaks in the water system and the capture of water infrastructure information in databases. The WSSP's objectives also have regard to flood risk management.

4.14 Drinking Water Services

4.14.1 Drinking Water Supply

The vision for water supply services in the Dublin Region is ‘to supply adequate drinking water to meet present and future demand in a sustainable manner to appropriate quality standards to all customers within the region’ based on the consideration of the three principal aspects of quality, quantity and sustainability.

The Dublin Region Water Supply Area is defined by the combined areas served by the Dublin Region Water Supply Schemes, operated by the local authorities on behalf of Irish Water, namely:

- Liffey Water Treatment Plant at Ballymore Eustace (Dublin City Council);
- Liffey Water Treatment Plant at Leixlip (Fingal County Council);
- Vartry Plant at Roundwood (Dublin City Council);
- Dodder Plant at Ballyboden (Dublin City Council); and
- Bog of the Ring Groundwater (Fingal County Council).

The population in the Greater Dublin Area is projected to increase 1.64 million by 2021 (up from 1.52 million in the 2011 census). The existing water treatment plants at Ballymore Eustace, Ballyboden, Leixlip and Roundwood are working to their full capacity in order to supply the daily demands. While recent expansions at Ballymore Eustace and Leixlip have improved water treatment capacity to 623MI per day, bottlenecks still exist which can impede deployment of that water to the supply network. Irish Water is addressing these key network constraints as a priority. Over the past decade, demand

requirements have regularly exceeded water supply by 1-2%, where 20% headroom is considered best practice. While employing water conservation strategies and addressing leakages will have mitigating effects, increased population and economic growth will increasingly lead to a deficit of supply-demand. Currently, more than 84% of Dublin’s water capacity relies on the river Liffey. The Bohernabreena reservoir and waterworks located in the Glenasmole valley is managed by Dublin City Council. The reservoir supplies approximately 35,000 households in the southern central part of Dublin city. There are two reservoirs, the upper lake which is the larger of the two is used for holding drinking water. It supplies approximately 18.2 million litres of water a day to Dublin. This is only about 5% of Dublin’s needs but it is still worthwhile.

In order to meet future demands, to help mitigate the risks of climate change and pollution, and to ensure system resiliency and security, Dublin City Council embarked on a study to determine a new major water source to meet projected demand in the long-term called the Water Supply Project for the Dublin Region. From January 2014, responsibility for this project was transferred from Dublin City Council to Irish Water and is now known as the Water Supply Project for the Eastern and Midlands Region. This project is studying the options, including bringing water from the river Shannon via a new storage reservoir in the midlands. Irish Water is undertaking public consultation, specialist surveys and modelling to assess the range of water supply options.

It has been outlined to the local authorities that Irish Water will facilitate the provision of wastewater and water services and connections/infrastructure as new developments are approved and progressed.

4.14.2 Drinking Water Conservation

Dublin City Council has established a number of water supply by-laws to reduce waste and demand levels. These by-laws include the mandatory use of water saving devices in new buildings. The Development Plan places an emphasis on water conservation and seeks to ensure the efficient use of water services. It seeks to maximise the potential for beneficial re-use of water and to reduce leakage to the minimum level possible in the water supply system. Dublin City Council has also embarked on a major watermain rehabilitation project to reduce unaccounted for water lost through leakage in older watermains in Dublin.

4.14.3 Drinking Water Quality

The Central Laboratory carries out daily monitoring of drinking water. An extensive water quality monitoring programme is in place covering raw water sources, in process water at the water treatment plants and treated water throughout the distribution network.

Sampling and analysis is carried out in fulfilment of the requirements of:

- European Communities (Drinking Water) (No.2) Regulations, 2007 (S.I. 278 of 2007); and
- European Communities (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989. (S.I. 294 of 1989).

Monitoring results are returned to the EPA annually. The quality of drinking water supplied by each local authority is summarised in an annual report produced by the EPA.

4.14.4 Assessment of Drinking Water Quality

In the most recent report on drinking water quality in Ireland the EPA has made the following assessment of the monitoring and quality of the water supply in Dublin city:

- Dublin City Council carried out 11,969 tests on drinking water during 2013. Thus, Dublin City Council met (and indeed exceeded) the monitoring requirements as outlined in the regulations.
- The overall rate of compliance in Dublin City in 2013 was 99.7% (same as reported in 2012). In 2013 microbiological compliance was 100% and chemical compliance was 99.8% (compared to 100% microbiological and 99.6% chemical compliance in 2012).

Dublin City Council datasets for drinking water are available and form the basis for Annual Drinking Water Monitoring returns to the EPA.

4.14.5 Drainage Services

The vision for drainage services for the Dublin Region is to achieve and maintain good ecological status of all receiving waters by 2015. This is in line with the requirements of the Water Framework Directive which requires that the collection, transport, treatment and disposal of both foul sewage and stormwater are managed effectively to achieve this. Irish Water is nationally responsible for wastewater services.

4.14.5.1 Foul Sewage Treatment

All foul sewage in the Greater Dublin Drainage Region is currently transmitted to the Ringsend Wastewater Treatment Plant (WWTP) for treatment. The Ringsend WWTP has an existing capacity of 1.65 million population equivalent (p.e.) but currently treats an average load of 1.9

million p.e. To allow for future growth it will be necessary to increase capacity to at least 2.1 million p.e. Studies are currently underway to assess the potential impacts of upgrading the treatment plant. All of the sludge products currently generated are either recycled as a useful fertiliser, or used as a green energy source. Sampling and analysis of Ringsend Wastewater Treatment Plant effluent is carried out daily in fulfilment of the requirements of the Urban Wastewater Treatment Regulations 2001 (S.I. 254 of 2001).

The latest EPA Report on urban wastewater discharges¹² indicated that Ringsend WWTP in 2013 was failed on quality standards. The annual environmental report for Ringsend for 2014 indicated that some parameters exceeded emission limits, including: chemical oxygen demand, biological oxygen demand, suspended solids, total nitrogen and total phosphorus. The final effluent from the primary discharge point was however compliant with emission limits for *E. coli*, toxicity and pH.

The capacity of this plant to treat the volume and loading of wastewater created by the growing population is inadequate and will continue to be problematic, even with the planned upgrade of the plant, with maximum capacity of the extended WWTP exceeded in 2014. The upgrade and expansion of the Ringsend treatment works will be implemented in three phases, with anticipated completion of all works by 2020, subject to the grant of relevant permits.

The Greater Dublin Drainage Project, currently in preparation for a planning submission in 2016, is a new regional wastewater treatment project to serve the greater Dublin area with a planned

treatment plant in Clonshagh, Fingal. It is intended to divert drainage from north of the city to the new treatment plant, thus freeing up capacity at Ringsend. Subject to planning approval, it is anticipated that this project will be operational by 2022.

Under the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. 684 of 2007) wastewater discharges above a certain threshold have to be licenced by the Environmental Protection Agency. Dublin City Council currently has a licence application in respect of the discharge from Ringsend wastewater treatment plant with the EPA and has to adhere to the discharge emission limit values that are set by the EPA. Local authorities are expressly forbidden under these regulations from knowingly allowing further developments if these developments are likely to result in a deterioration in the status of any waterbodies.

4.14.5.2 Foul Sewage Collection

The sewer systems within the Greater Dublin Drainage Region are made up of older combined sewer systems, partially combined systems and more modern separate systems. In the latter, surface water is not supposed to enter the foul sewer network. However, there is, inevitably, some infiltration due to incorrect connections, defective pipes and manholes etc. The older combined and partial systems allow surface water enter the system. This leads to the capacity of the sewer network being exceeded from time to time during heavy rainfall (storm) events. Such sewer networks are designed to include mechanisms to allow this excess flow spill into separate surface water systems or directly into receiving waterbodies. These mechanisms are called Combined Sewer Overflows (CSOs).

¹² Focus on Urban Waste Water Treatment in 2013. EPA (2014).

Increased levels of development in the catchment of a combined or partially combined sewer system will lead to increased flows in the sewer network through increased foul sewage loading and also through increased surface water runoff due to an increase in impermeable pavements etc. This in turn will lead to increasing frequency of spills from CSOs and also to increased amounts of foul sewage within those spills. These events will result in increased pollution of receiving waters. In the case of the more modern separate systems, increased development may also result in increased pollution as these systems have a limited capacity and, if this is exceeded, there will be inevitable spills from the network at overflows or pumping stations. The pollution loading in this latter case will be higher, albeit with smaller volumes.

Significant parts of the Dublin sewer network have insufficient capacity to effectively collect and transport the sewage from the point of collection to the point of treatment. This results in increasing dependence on CSOs and consequent pollution and deterioration of waterbodies. In common with wastewater treatment works all sewage collection systems must be licenced by the EPA under the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. 684 of 2007). Dublin City Council currently has a licence application with the EPA in respect of the entire sewage collection system (agglomeration) including sewers, CSOs, pumping stations and has to adhere to the discharge emission limit values set by the EPA. Local authorities are expressly forbidden under these regulations from knowingly allowing further developments if these developments are likely to result in increased spills or pollution leading to deterioration in the status of any waterbodies.

The EPA published the 'Focus on Urban Waste Water Treatment in 2013 (2014)' which deals mainly with the assessment of waste water discharges against the quality and sampling standards specified in the 1991 Urban Waste Water Treatment Directive, using the water services authorities self-monitoring data which was provided to the EPA. The report also provides a review of the environmental performance of urban waste water treatment plants and outlines the waste water treatment infrastructure in place in Ireland during 2013. Local Authorities were responsible for the management of urban waste water collection and treatment infrastructure for the reporting period of 2013. Responsibility for these assets transferred to Irish Water, the new national water utility, in 2014.

4.14.5.3 Stormwater Collection and Discharge

The issues surrounding surface water or stormwater collection and disposal are inextricably linked to those of the foul sewer network as outlined above due to the impact of sewage overflows on the quality of the stormwater. The quality of stormwater within an urban area is also affected by ingress of surface pollutants from pavements. Both of these issues can be significantly improved by the adoption of Sustainable Urban Drainage Systems (SUDS) which will result in reduced or delayed runoff quantities into the system and, potentially, improvement in runoff quality by percolating runoff through SUDS devices such as swales or wetlands.

Dublin City Council has policies to ensure that Sustainable Urban Drainage Systems (SUDS) are implemented in accordance with the Greater Dublin Drainage Study guidelines, including the provision of green roofs, swales, attenuation and semi permeable paving. To future progress the use of SUDS, and to ensure that principles

Plate 4.1: Eastern River Basin District



Source: Eastern River Basin District River Basin Management Plan 2009–2015

of SUDS are incorporated in design proposals, the Plan includes a number of policies in relation to SUDS.

The essential elements of these policies are to replicate, insofar as possible, the drainage characteristics of natural landscapes in the urban environment and thereby reduce the impact of impermeable areas and quick surface water runoff on the drainage network and on the receiving waterbodies.

4.14.5.4 Quality of Waterbodies in General

The EU Water Framework Directive (WFD) 2000/60/EC establishes a framework for the protection of all waters (inland surface waters, transitional and coastal waters and groundwaters) throughout Europe. The aim of the Directive is to enhance and restore aquatic ecosystems so that they achieve good ecological and chemical status by 2015.

The Water Framework Directive was transposed into Irish legislation through the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The Directive promotes integrated river basin management as the most efficient way to achieve its aims. For the purposes of implementing the Directive, Ireland was divided into eight river basin districts under the first cycle of River Basin Management Plans (RBMPs). Dublin City Council is one of the 12 local authorities that make up the Eastern River Basin District (ERBD) and acts as lead local authority for the district. A preliminary Characterisation Report was produced in December 2004, which included an analysis of the ERBD's characteristics followed by the 'Water Matters' document in 2007. This document reported on significant water management issues in the ERBD together with proposed measures to solve the problems identified.

Based on these preliminary documents a River Basin Management Plan (RBMP) for the ERBD was published in December 2008. The plan sets out the aims and objectives for improving water quality throughout the district, e.g., in the case of surface waters the objectives are to:

- Prevent deterioration and maintain high or good status,
- Improve waters where appropriate to achieve at least good status,
- Progressively reduce chemical pollution, and
- Achieve protected area objectives.

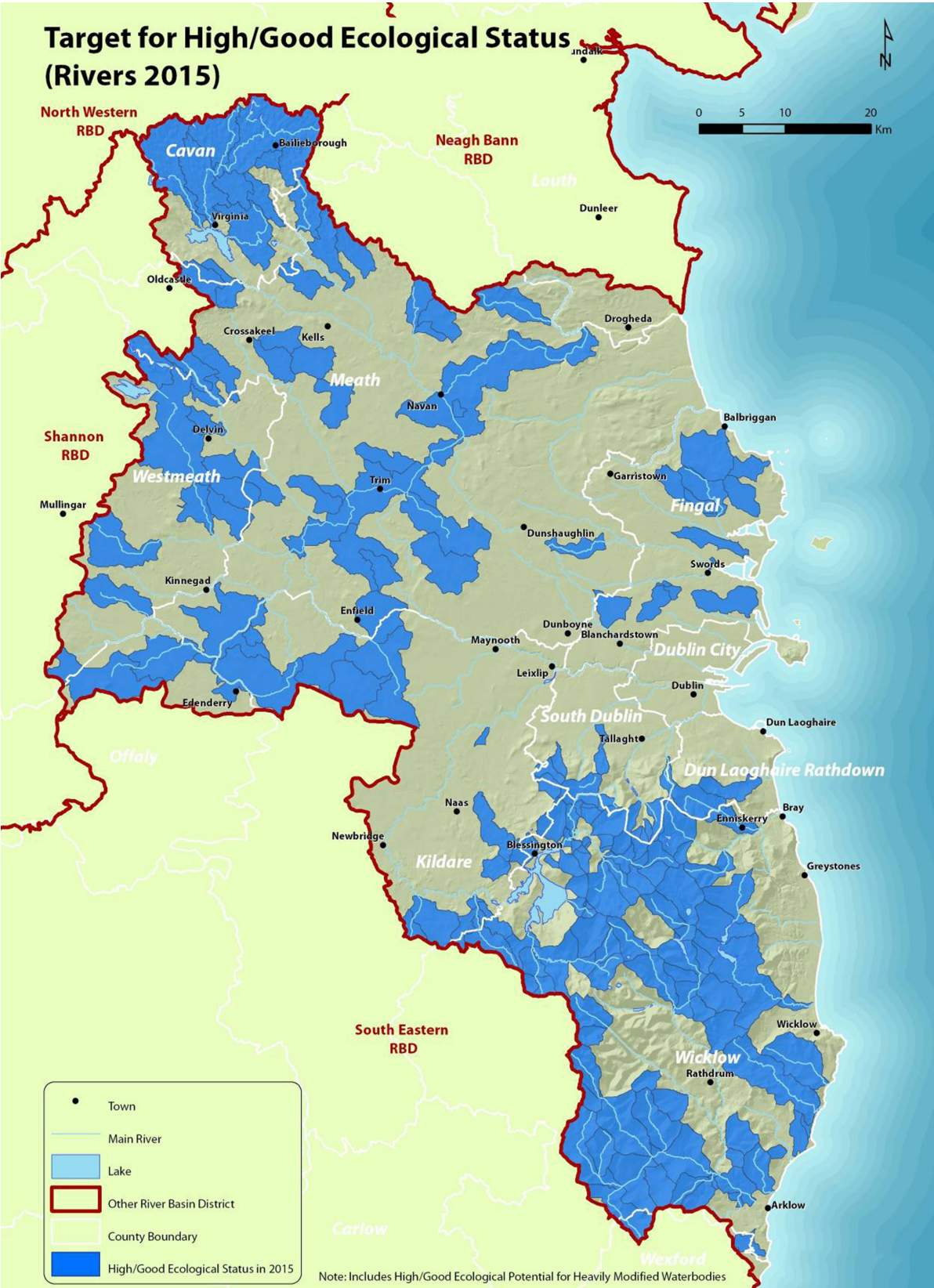
To achieve good status for our waters requires specific programmes of measures to be undertaken. See **Plate 4.2** for the targets set for ecological status of rivers for 2015 (current WFD requirements) and **Plate 4.3** for the status targets of rivers for 2021, forming the next cycle of the River Basin Management Plan. Updated RBMPs for the second cycle of plans are expected to be delivered in 2017.

Basic measures are those required by existing legislation while supplementary measures are those required in situations where basic measures alone are judged to be inadequate to achieve good status. Dublin City Council has drawn up a Programme of Measures for the protection and improvement of waters in its functional area.

4.14.16 Monitoring

The Dublin City Council Central Laboratory maintains baseline information for a number of areas, including: general water quality in rivers and streams and major inflows, bathing water quality, water quality in rivers and streams under the Dangerous

Map 4.11: Plate 4.2: Targets for High/Good Ecological Status (Rivers 2015)



Source: Eastern River Basin District River Basin Management Plan 2009–2015

Substances Regulations, and quality of influent to and effluent from Ringsend sewage treatment plant.

The principal rivers flowing through the Dublin city area are the Camac, Dodder, Liffey, Santry and Tolka. Dublin City Council carries out monitoring of chemical and microbiological quality of the river waters regularly. In addition, the EPA carries out biological monitoring of Irish rivers and publishes periodic reports. **Map 4.11** presents the main river bodies in Dublin city.

4.15 Assessment of Water Quality

4.15.1.1 Quality of River Water Bodies

In the WFD status reporting phase (2009–2012), the EPA gives the rivers in Dublin city the following biological quality ratings (sampling point is either within the Dublin City Council functional area or the nearest point upstream if no sampling point exists within the Dublin City Council area).

Table 4.8: Water Quality in Rivers

River	Biological Q Value
Camac	Q ₂₋₃
Dodder	Q ₃₋₄
Liffey	Q ₃₋₄
Santry	Q ₂₋₃
Tolka	Q ₂₋₄

Note: Q₅ Good Quality; Q₄ Fair; Q₃₋₄ Transitional; Q₃ Doubtful; Q₂ Poor; Q₁ Bad Q_{2/0} 0 indicates toxic conditions

Currently in Dublin city, the water quality status of waterbodies monitored under the Water Framework Directive are classified as ‘moderate’ (Liffey and Dodder) to ‘poor’ (Santry, Camac and Tolka Rivers), as shown in **Map 4.12**.

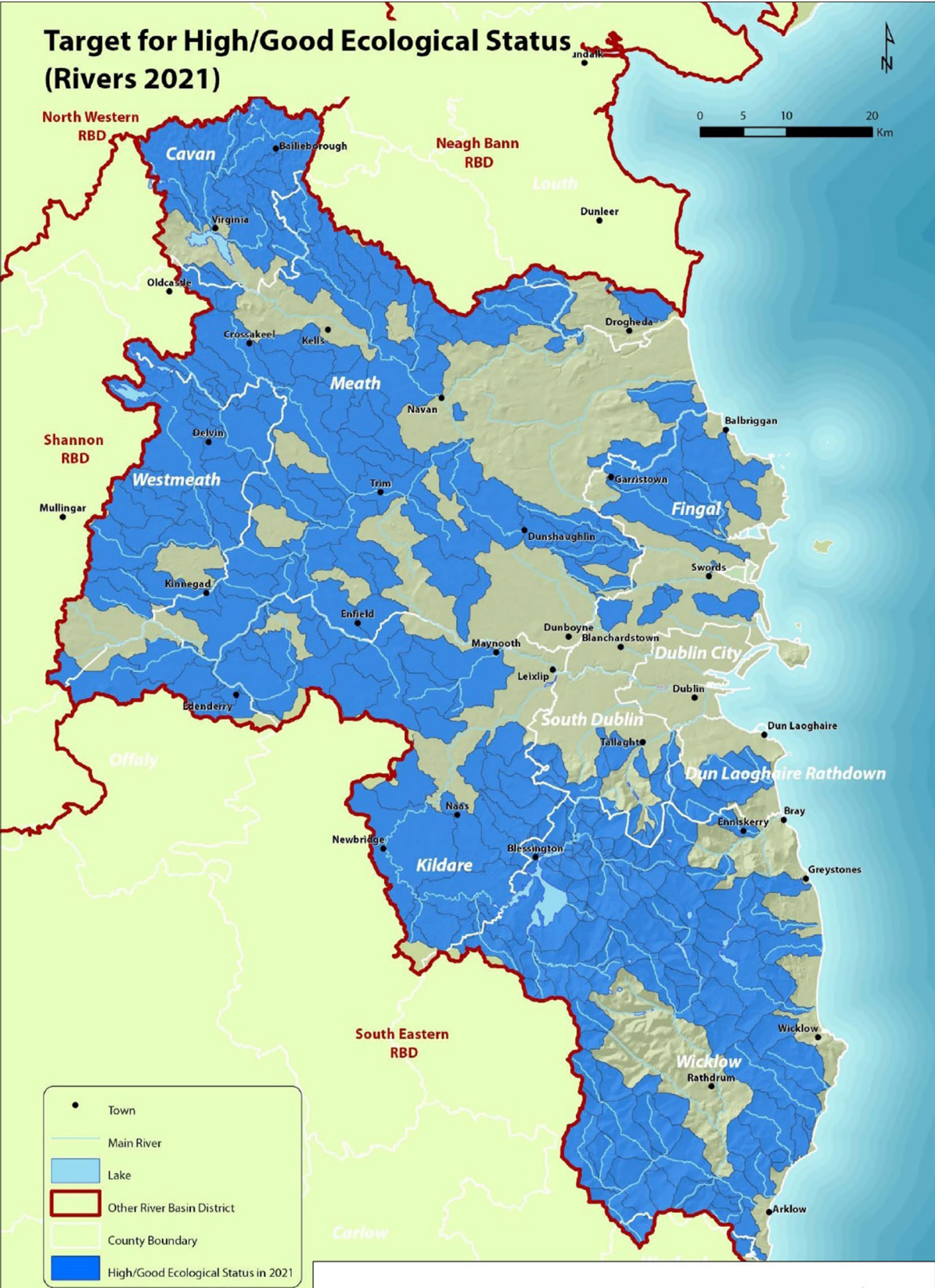
In addition, the Characterisation Report prepared for the ERBD classified the rivers in the Dublin City Council area as either ‘at risk’ or ‘probably at risk’ of not reaching good status by 2015 unless improvement measures were implemented. It should be noted that the quality of river waters flowing into the Dublin City Council area are, to a large extent, determined by activities in the upstream catchments in adjoining local authorities. However, the management of water quality on a single national river basin district under the Water Framework Directive should lead to a more integrated approach to the management of the all river catchments. The main pressures to rivers in Dublin city are upstream pollution, combined sewer overflows, misconnections of wastewater from individual houses and urban runoff. It should be noted that both groundwater bodies in Dublin city are currently at ‘good’ water body status.

Continued implementation of the Management Plan and Programme of Measures for the Eastern River Basin District forms a major element of ongoing protection and enhancement of the quality and status of the water environment, as too will as the next cycle of river basin management plans. The Plan has had regard to the provisions of the Water Framework Directive and includes policies to promote and improve the ecological status of water services and bodies in the city.

4.15.1.2 Quality of Bathing Waters

There are three designated bathing waters within the Dublin City Council area at Dollymount, Merrion Strand and Sandymount. Regular monitoring of bathing water quality is carried out during the bathing season in conformance with the requirements of the Bathing Water Quality Regulations 2008 (S.I. 79 of 2008).

Plate 4.3: Targets for High/Good Ecological Status (Rivers 2021)



Source: Eastern River Basin District River Basin Management Plan 2009–2015

All three bathing waters were in compliance with the EU mandatory and the Irish national standards for bathing water quality in 2013, and water quality at Dollymount and Sandymount had ‘good’ quality water status, while Merrion Strand had ‘sufficient’ water quality status. There were no blue flag beaches or marinas in Dublin city for 2014, however, the Development Plan includes policies which relate to zone management and the improvement of water quality and bathing facilities around Dublin Bay.

4.15.1.3 Quality of Water in the Liffey Estuary and Dublin Bay

Monitoring of water quality in the Liffey Estuary and Dublin Bay is carried out by the EPA. In addition, in 2009 Dublin City Council began an intensive programme of monitoring of water quality in the estuary, Dublin Bay and freshwater inflows in relation to the expansion of the Ringsend Wastewater Treatment Plant with the programme lasting for a minimum of 12 months.

The Liffey estuary has been designated as a sensitive area under the Urban Waste Water Treatment Regulations, 2001 (S.I. 254 of 2001). In its most recent WFD assessment of water quality in the Liffey estuary for the period 2010–2012, the trophic status has been assessed as moderate by the EPA, due to being a heavily modified waterbody, which represents no change from the previous assessment period in 2007–2009. Dublin Bay has been assessed as unpolluted in the 1999–2003, 2002–2006 and 2007–2009 periods. The lower Liffey estuary is currently at ‘good’ water status while the Tolka and North Bull Island estuaries are at ‘moderate’ status. The Dublin Bay coastal water body is at ‘good’ status, as shown in **Map 4.12**.

One potentially negative aspect of water quality trends in the Liffey estuary and

Dublin Bay has been the reoccurrence of opportunistic macroalgae in the Tolka estuary and south Dublin seashore. The presence of these macroalgae can have an effect on marine benthic fauna by smothering the underlying sediment and contributing to eutrophication.

The reoccurrence of strands of macroalgae (*Ectocarpus*) along the south Dublin seashore is also of concern as they are unsightly and give rise to unpleasant odours during the decay process. The EPA has stated that the abundance and distribution of the opportunistic algal species within Dublin Bay will be assessed as part of the national Water Framework Directive monitoring programme.

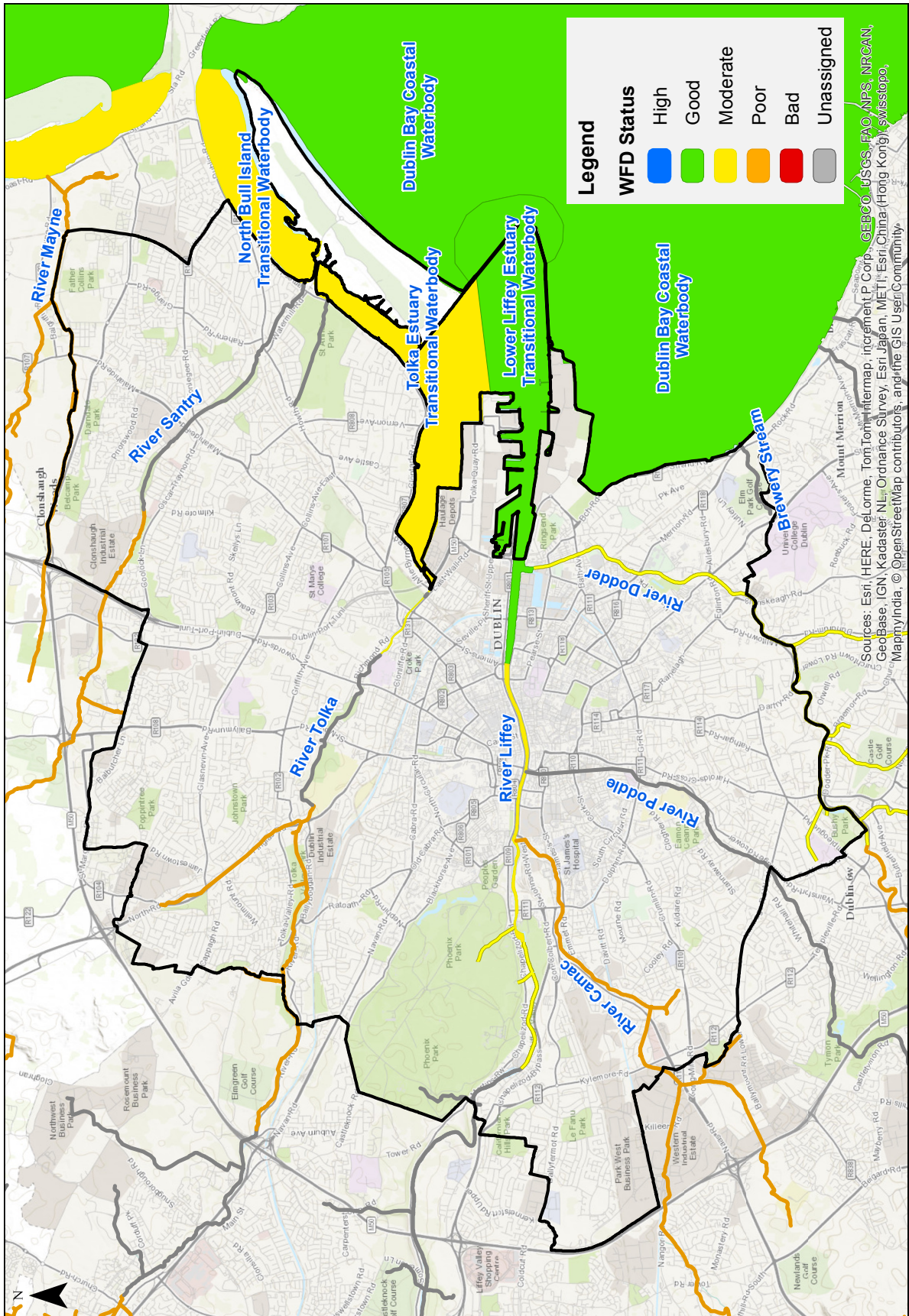
4.15.1.4 Impact of the Development Plan on the Status of Waterbodies

Dublin City Council is committed to maintaining and improving the status of the various waterbodies referenced in the Water Framework Directive as required by the various regulations that transpose this Directive into Irish law. While various engineering projects are in train by Irish Water to address the current capacity constraints in the collection, treatment and disposal network for sewage and stormwater flows, proper development management must also form a key part of Dublin City Council’s delivery on that commitment. In this regard, all policies in the Plan have been assessed to ensure that they are in accordance with the overall requirement to protect and enhance the status of the waterbodies.

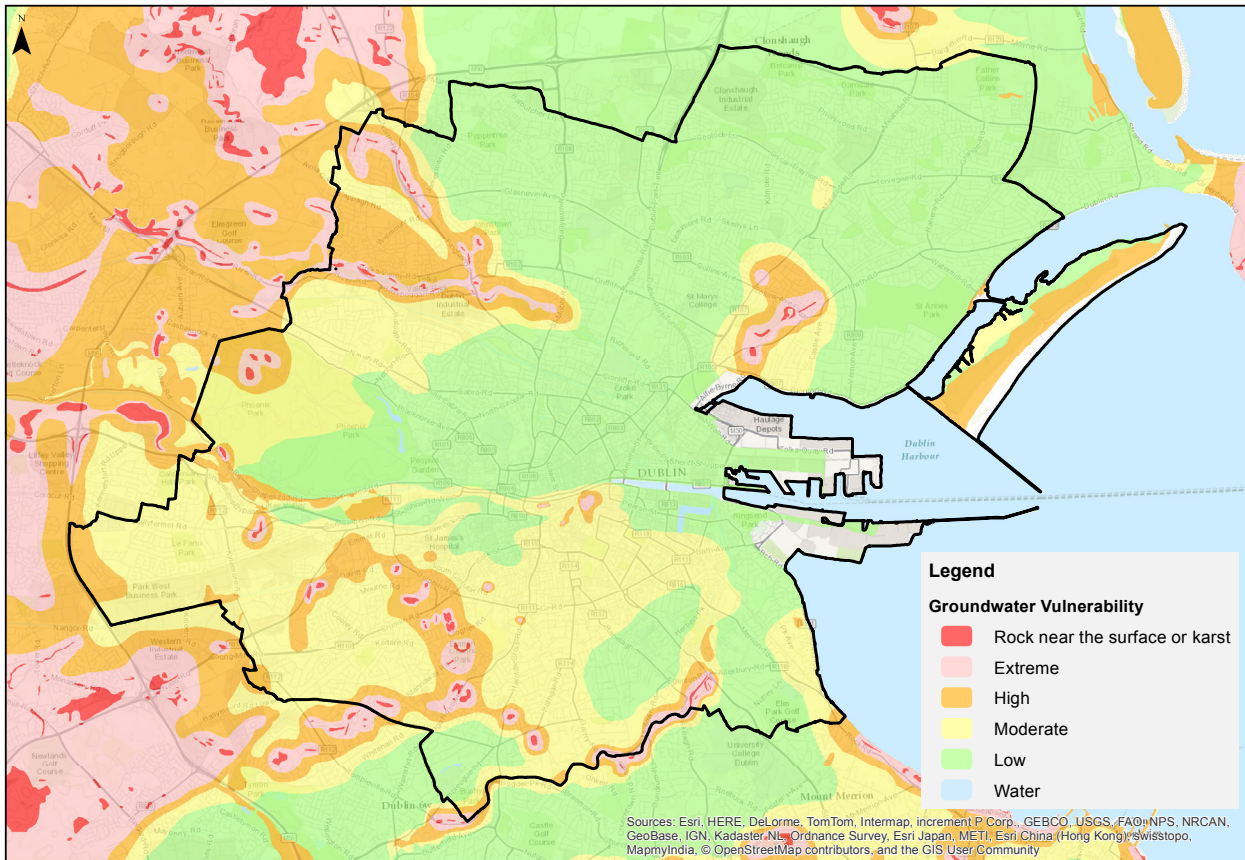
4.16 Groundwater Vulnerability

The GSI rates aquifers based on their hydrogeological characteristics as well as on the value of the groundwater resource. Ireland’s entire land surface is divided into

Map 4.12



Map 4.13



aquifer categories. The Dublin city aquifer is classified as ‘locally important’, i.e., an aquifer with bedrock that is moderately productive only in local zones. The GSI further rates aquifers according to their vulnerability to pollution. Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter underground water. Dublin city has a variable vulnerability rating, from low vulnerability up to moderate, high, extreme and ‘X’ (where the rock is karst or located close to the surface), as shown in Map 4.13.

4.17 WFD Protected Areas

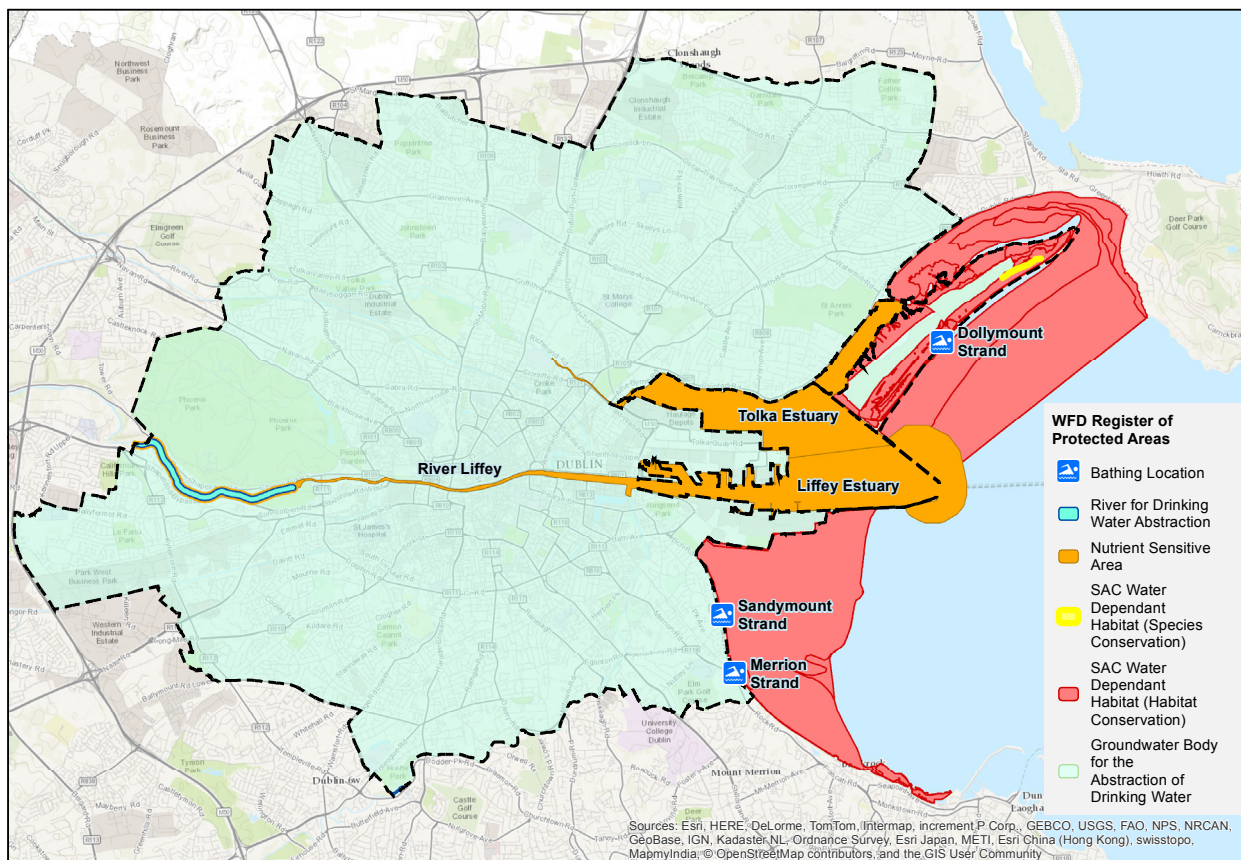
Article 6 (Annex IV) of the Water Framework Directive requires each Member State to establish a register of protected areas for water bodies or parts of water bodies that

must have extra controls on their quality by virtue of how their waters are used by people and wildlife. This register is split into five categories as outlined by the EPA:¹³

- i. Areas designated for the abstraction of water intended for human consumption under Article 7;
- ii. Areas designated for the protection of economically significant aquatic species (i.e. shellfish);
- iii. Bodies of water designated as recreational waters, including areas designated as bathing waters under Directive 76/160/EEC;
- iv. Nutrient-sensitive areas, including areas designated as vulnerable zones

¹³ WFD Register of Protected Areas Guidance Document and GeoDatabase. EPA (2015).

Map 4.14



under Directive 91/676/EEC and areas designated as sensitive areas under Directive 91/271/EEC; and

- v. Areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant European Sites (Natura 2000) designated under Directive 92/43/EEC (1) and Directive 79/409/EEC (2).

A number of these WFD protected areas are present within Dublin city and these are:

- Bathing locations (Dollymount, Merrion Strand and Sandymount);
- Nutrient Sensitive Areas (River Liffey, Liffey Estuary and Tolka Estuary);

- Special Areas of Conservation Water Dependent Habitat and Species Conservation Objectives (various water dependant habitats such as terrestrial wetlands, mudflats and sandflats, saltmarsh habitats and marine community types associated with North Dublin Bay SAC and South Dublin Bay SAC);
- Rivers for the abstraction of drinking water (River Liffey); and
- The associated groundwater body for the abstraction of drinking water (Dublin Urban Groundwater body).

Map 4.14 outlines the locations and distribution of these protected areas.

4.18 Flooding

Flooding is a natural process that can happen at any time in a wide variety of locations and plays a role in shaping the natural environment. Much of this has been attributed to climate change, resulting in increased and more intense rainfall, e.g., more thunderstorms, increasing sea levels and also due to increasing levels of urbanisation and altered land use. Coastal erosion or accretion can also increase the risk of flooding in some areas. There are several types of flooding events, which can arise separately or in combination. The main types of flooding are from:

- i. Tidal/coastal flooding which arises from the sea or estuaries;
- ii. River or fluvial flooding which arise from rivers or streams;
- iii. Pluvial or surface water flooding which arises directly from rainfall;
- iv. Groundwater flooding;
- v. Dam breach; and
- vi. Sewer/infrastructural failure.

4.18.1 Flood Policy

The EU Floods Directive (2007/60/EC) applies to river basins and coastal areas at risk of flooding. With trends such as climate change and increased domestic and economic development in flood risk zones, this poses a threat of flooding in coastal and river basin areas. The Catchment Flood Risk Assessment and Management Studies (CFRAMS) programme commenced in Ireland in 2011 and forms a key part of the medium to long-term strategy for the management of flood risk in Ireland. The CFRAMs delivers on key components of the National Flood Policy Review (2004) and the Floods Directive, which are the driving

forces behind the management of flood risk in Ireland. The CFRAMS are composed of three phases including: preliminary flood risk assessment; CFRAM-specific catchment studies and activities; and implementation and review. Consultation stages are also provided for (on the preliminary flood risk assessment, flood hazard mapping and flood risk management plans).

The Office of Public Works is responsible at a national level for monitoring and addressing flood risk and along with the DECLG, has published a national policy guidance document on the consideration of flood risk within planning and development management. These Government Guidelines on the Planning System and Flood Risk Management (2009) were issued under Section 28 of the Planning and Development Act 2000 (as amended), and sets out that development plans and local area plans, must establish the flood risk assessment requirements for their functional area. Flood risk assessment is required by planning authorities to be an integral and leading element of their development planning functions.

The guidelines are specifically aimed at linking planning and development with flood protection and flood risk assessment and recommend a clear and transparent assessment of flood risk at all stages in the planning process. It is a requirement of the guidelines that the Development Plan and all future planning decisions have regard to the guidelines.

- The key guiding principles of the Flood Risk Management Guidelines are to:
- Avoid the risk, where possible;
- Substitute less vulnerable uses, where avoidance is not possible; and
- Mitigate and manage the risk, where avoidance and substitution are not possible.

The Flood Risk Assessment (FRA) of the Regional Planning Guidelines for the Greater Dublin Area 2010–2022 states that Dublin City is vulnerable to two key sources of flooding – fluvial and coastal. However, effective management of flood risk coupled to wider environmental, sustainability and economic considerations means that it is possible to facilitate the continued consolidation of the existing urban structure of the GDA. The RPGs state that ‘it is considered that these locations should be encouraged to continue to consolidate and to grow in order to bring about a more compact and sustainable urban development forms while at the same time managing flood risk appropriately’.

The RPGs also set out the key policy recommendations regarding avoiding and managing flood risk within the GDA as follows:

- Identify and consider at the earliest stage in the planning process flood hazard and potential risk;
- Identify flood risk areas on the Development Plan and Local Area Plan maps;
- Review existing Development Plans and Local Area Plans to ensure that issues related to flood risk has been addressed in a manner consistent with the Flood Risk Management Guidelines. Where lands are already zoned for housing or other vulnerable development in flood risk areas, the Council should undertake a re-examination of the zoning in accordance with the sequential approach. Regional Planning Guidelines may need to identify Plans which will require a variation to take account of FRA;
- Include policies which ensure that flood risk areas targeted for development

following the sequential approach should be planned, designed and constructed to reduce and manage flood risk and be adaptable to changes in climate;

- Include policies to ensure that flood risk and impact is considered as a key element in the assessment of future waste and mineral planning strategies and developments;
- Include policies that ensure that the location of key infrastructure will be subject to Flood Risk Assessment;
- Include policies on the importance of the inclusion of Sustainable Urban Drainage Systems, (SUDS) in future developments, in accordance with the recommendations of the Greater Dublin Strategic Drainage Study Guidelines and Appendix B of the Flooding Guidelines published by the Department and the OPW.¹⁴

4.18.2 Strategic Flood Risk Assessment

A strategic flood risk assessment (SFRA) has been undertaken as part of the Development Plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impacts elsewhere. It should be noted that the SFRA is a work in progress based on the best available data and may be subject to change and revision as data, particularly flood mapping, is updated.

The Flood Risk Management Guidelines recommend that a staged approach is adopted when undertaking an FRA and includes:

¹⁴ Regional Planning Guidelines for the Greater Dublin Area 2010–2022 (2010).

Stage 1 – Flood Risk Identification:

To identify whether there may be any flooding or surface water management issues that will require further investigation. This stage mainly comprises a comprehensive desk study of available information to establish whether a flood risk issue exists or whether one is reasonably likely to exist in the future.

Stage 2 – Initial Flood Risk Assessment:

If a flood risk issue is deemed to exist arising from the Stage 1 Flood Risk Identification process, the assessment proceeds to Stage 2 which confirms the sources of flooding, appraises the adequacy of existing information and determines the extent of additional surveys and the degree of modelling that will be required. Stage 2 must be sufficiently detailed to allow the application of the sequential approach within the flood risk zone.

Stage 3 – Detailed Flood Risk

Assessment: A detailed FRA is carried out where necessary to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and the effectiveness of any proposed mitigation measures.¹⁵

For the purposes of the Plan, the SFRA covers Stages 1 and 2, i.e., flood risk identification and initial flood risk assessment. It has also identified where Stage 3 flood risk assessments will be required to support site-specific planning decisions.

The assessment and mapping of areas of flood risk is based on the draft outputs from the Eastern Catchment Flood Risk Assessment and Management Plan (ECFRAM).

The flood zones are presented in **Map 4.15** and indicate: the Flood Zone A extents, where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 year for river flooding or 0.5% or 1 in 200 for coastal flooding); and the Flood Zone B extents, where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding).¹⁶

4.18.3 Flood Risk Management Strategy

As part of the Dublin City Development Plan, a Strategic Flood Risk Assessment has been undertaken which sets out the Flood Risk Management Strategy (**see Volume 7**).

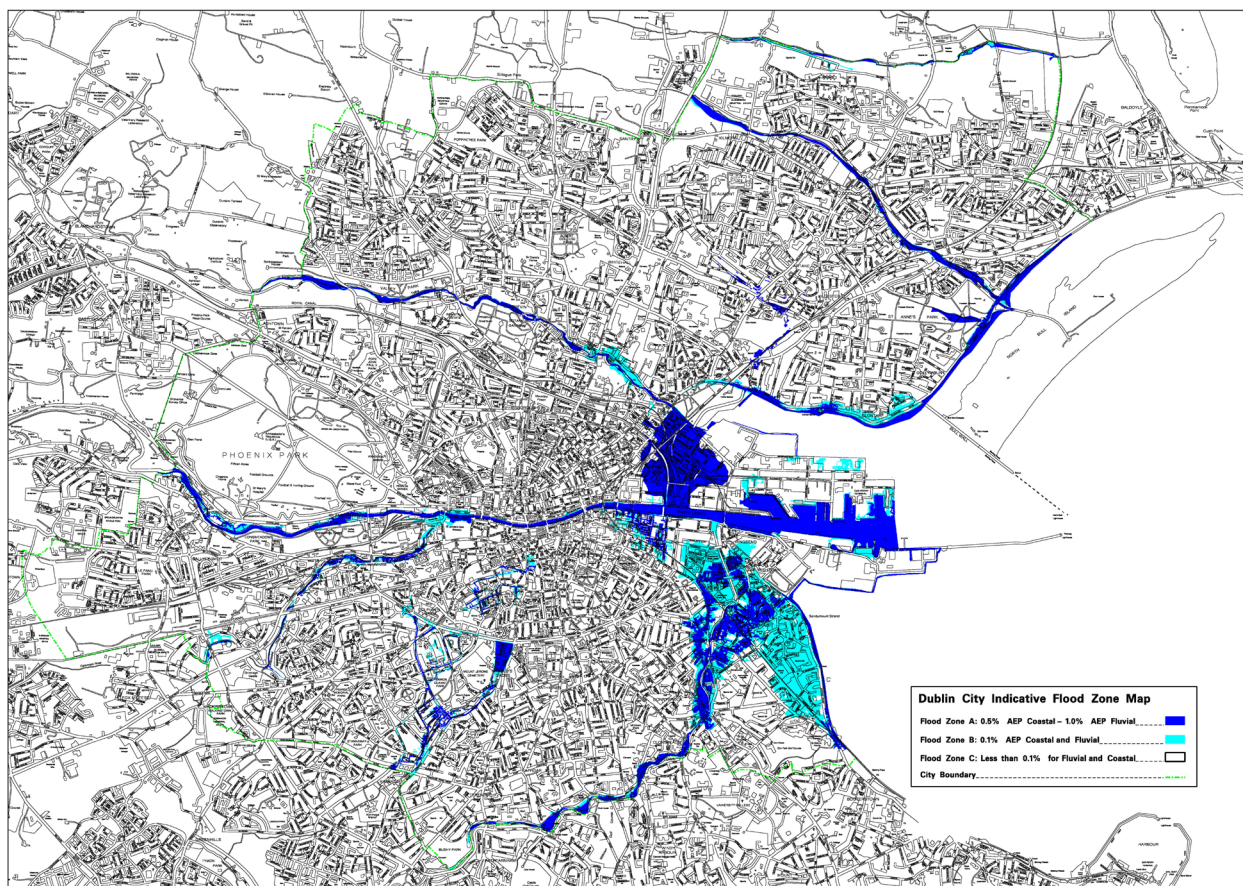
In order to guide both applicants and planning officials through the process of planning for and managing flood risk, the key features of a range of development scenarios have been identified (relating to the flood zone, development vulnerability and presence or absence of defences). For each scenario, a number of considerations relating to the suitability of the development are summarised below, and are shown as process flow charts in Appendix 4 (volume 7, Strategic Flood Risk Assessment). The aim of the flow charts is to provide a guide through the flood risk assessment process and to indicate which approaches to managing flood risk are expected in different circumstances. However, it is accepted that flood risk and its management is a complex and highly site specific phenomenon so the specific requirements of the assessment should be agreed prior to commencing work.

The Flood Zone Maps have been developed using the most appropriate

¹⁵ The Planning System and Flood Risk Management Guidelines & Technical Appendices (2009).

¹⁶ The Planning System and Flood Risk Management Guidelines & Technical Appendices (2009).

Map 4.15



data available to Dublin City Council at the time of preparing the Plan. The Flood Zone Maps have been created specifically to inform the application of the Justification Test and to guide development policy within the city. However, it should be borne in mind that the input data was developed at a point in time and there may be changes within the catchment that mean a future study, or more localised assessment of risk may result in a change in either flood extent or depth. This means a site specific flood risk assessment may result in locally appropriate information which could show a greater or less level of risk than is included in the Flood Zone Maps. This is to be expected and it will require discussion between the developer and the DCC Planning and Engineering teams to ensure the assessment is appropriate and relevant to the site in question.

An appropriately detailed Flood Risk Assessment (FRA) will be required in support of any planning application. The level of detail will vary depending on the risks identified and the proposed land use. As a minimum, all proposed development, including that in Flood Zone C, must consider the impact of surface water flood risks on drainage design and demonstrate compliance with the minimum required finished floor levels, detailed in the following sections of this report. In addition, flood risk from sources other than fluvial and tidal should be reviewed, as should the impacts of climate change.

For sites within Flood Zone A or B, a site specific 'Stage 2 – Initial FRA' will be required, and may need to be developed into a 'Stage 3 – Detailed FRA'. The extents

of Flood Zone A and B are delineated through this SFRA. However, future studies may refine the extents (either to reduce or enlarge them) so a comprehensive review of available data should be undertaken once a FRA has been triggered.

The FRA may be a relatively straight forward, qualitative appraisal of risks accompanying the drainage design. Alternatively, the findings of the Eastern CFRAM study and the various other studies that have been carried out in Dublin city may be drawn upon to inform finished floor levels and provide details on flood depth, velocity and impacts of defence breach. This information will all be essential in understanding residual flood risks and in developing emergency plans. In other circumstances a detailed modelling study and flood risk assessment may need to be undertaken.

Any proposal that is considered acceptable in principle shall demonstrate the use of the sequential approach in terms of the site layout and design and, in satisfying the Justification Test (where required), the proposal will demonstrate that appropriate mitigation and management measures are put in place.

4.18.4 Existing Environmental Issues Relating to Water in Dublin City

The following broad range of issues has been identified, which include localised as well as more strategic issues:

- Compliance with the Urban Wastewater Treatment Directive is required.
- Irish Water's Water Services Strategic Plan to be taken into account.
- Requirements of Eastern River Basin Management Plan and associated Programme of Measures (ERBD and POM) to be taken into account, bearing in mind the revised updates to the RBMP.
- The supply, treatment, storing, delivery and quality of drinking water are all major issues for the city, as demand exceeds supply on occasion. However, this issue is now the responsibility of Irish Water.
- New major drinking water source to meet projected water demand is required. Irish Water is currently examining potential major water sources for the future.
- Wastewater treatment capacity, particularly with regard to environmental impacts of Ringsend WWTW on Dublin Bay.
- Limitations in the capacity of the sewer network to be taken into account in the Plan, particularly the need to comply with EPA licence conditions.
- Continued implementation of Greater Dublin Sustainable Urban Drainage Strategy (SUDS) to be incorporated into the Plan.
- City Council area traversed by a number of key regional river systems; future development within the city area should not have a deleterious effect on the ecological status of these systems.
- Existing and proposed flood defence structures to be identified for protection in the Plan.
- Potential increased flood risk from changed land use patterns, climate change and predicted sea rise level.
- The current challenges in relation to flooding and flood risk are:
 - To reduce the flood risk in Dublin city to the National Flood Standards to above 1% annual exceedance probability (AEP) (or roughly 100 year flood event) for fluvial flooding and above 0.5% AEP (roughly 200 year flood event) for tidal flooding, as far as is reasonably possible.

- To comply fully with the DECLG and OPW Planning System and Flood Risk Management Guidelines for Planning Authorities in the Dublin City area.
 - To comply with Dublin City Council climate change adaption policy 2015 – 2021 in all flood alleviation projects, planning applications and flood warning systems.
 - To continue to work with the OPW on the development of CFRAM plans for the city’s major rivers and coastline as well as general policies and objectives.
 - To develop and where possible implement strategies to reduce the effects of non-tidal and non-fluvial flooding in Dublin city.
 - To liaise with Fingal, South Dublin, Dún Laoghaire-Rathdown, Meath, Kildare and Wicklow County Councils as well as the ESB and Irish Water in the management of flood alleviation on the rivers coming into Dublin city and the coastline adjacent to it.
- There is potential for interference with inland and marine waters morphology and aquatic habitats by watercourse diversions, channel diversions and alterations or removal of bank vegetation.
 - Greater co-ordination with the other planning authorities in the GDA to respond to these shared regional issues set out.
 - All river waterbodies in the city are currently at ‘moderate’ to ‘poor’ water quality status under the Water Framework Directive.

4.19 Material Assets

For the purposes of SEA, Material Assets are deemed to include transport and waste management.

4.19.1 Transport

The Dublin City Council area covers an area of approximately 115km² and is populated by 527,612 people. Within its boundaries there are just over 31km of Irish Rail track and approximately 13km of Luas track. The entire rail track within the Dublin City Council area is designated as major rail.

4.19.1.1 Existing Road Network:

A total of circa 1,200km of road is currently in the charge of Dublin City Council. The roads are of varying quality and are maintained on a demand/priority basis.

Most of the information readily available relates to the city centre, i.e., the area within the canals. The National Transport Authority notes that in total 192,670 people access the canal to the city centre in the morning peak (7.00a.m. to 10.00a.m.) by all modes of transport.¹⁷ This number is projected to increase significantly by 2020. It is also reported that 64,169 people accessed the city centre by car at peak time. The network within the city centre, i.e., the canals is full at 20,000 cars.

4.19.1.2 ITS – Signals and Traffic Management:

SCATS is a traffic management system that integrates the management of traffic signals and the co-ordination and timing of junctions in real time. Currently 618 junctions and pedestrian crossings are linked to the SCATS system. It is intended, subject to funding, to link all junctions

¹⁷ Report on trends in mode share of vehicles and people crossing the Canal Cordon 2006-2014. National Transport Authority and Dublin City Council (2015).s

Photo 4.1: Dublin Bikes Scheme



and pedestrian crossings to the SCATS system. The system is monitored on a 24-hour basis by Dublin City Council and a contractor.

4.19.1.3 Existing Public Transport Network:

The existing public transport network currently comprises bus, DART and the Luas tram lines. There are currently 200 km of bus lanes passing through the area, with more QBCs planned and under construction. The DART line runs through the Dublin City Council area from Malahide in the north (Fingal) to Greystones in the south (County Wicklow). There are two existing Luas tramlines running through the Dublin City Council area. The Red Line, which is 20 km in length, runs from Tallaght in the south (South Dublin) to The Point, and from Saggart to Connolly Station in the city centre. The Green Line, which is 16.5 km in length, runs from Bride’s Glen through

Stephen’s Green in the city centre to Sandyford in the south (Dún Laoghaire-Rathdown). The C1 Line to Docklands extension to the Red Line was completed in 2009. The B1 Line, which extends the Green Line to Cherrywood, was completed in 2010. The A1 Line to Citywest was completed in 2011. The Luas Cross City project has entered the construction phase and will link the Red Line and the Green Line and will extend to the north-west of the city to its terminus at Broombridge.

4.19.1.4 Existing Cycle Network:

To date a total of circa 191 km of cycle lanes have been provided within the Dublin City Council area. This is made up of both segregated lanes and combined bus and cycle lanes. The cycle lanes provided form part of a citywide cycle network. Construction was completed on a bicycle rental scheme for the city centre, Dublin’s

Map 4.11: Key Pedestrian Routes in Dublin City Centre

City Bikes, and the scheme began operation in September 2009 (see **Photo 1**). The scheme has been extremely successful, beginning with 450 bikes at 40 stations and expanding to 550 bicycles at 44 stations in 2011. In 2013 a major expansion was announced, to add a further 950 bikes and 58 additional hire stations. Dublin is the seventeenth city to have implemented such a bike scheme and is one of the most successful in the world.

4.19.1.5 Pedestrian Network and Environment:

It is estimated that there is approximately 2,400 km of footpath within the City Council area. This is of varying quality and it is maintained on a demand/priority basis.

Map 11 outlines Dublin city centre's key pedestrian routes.

Work is underway on a public realm strategy for the city council area that seeks, among other things, to improve the pedestrian experience. A way-finding strategy is also currently being implemented for the city centre.

In June 2015 the NTA and Dublin City Council published their joint Dublin City Transport Study which sets out proposals to enhance movement within and across the city and to facilitate a modal shift to greater use of public transport, cycling and walking. Specifically, the Study proposes extending the current 'bus gate' at College Green to exclude cars, vans and taxis on a 24-hour basis, restricting the street permanently to Luas, buses, cyclists and pedestrians and developing a much-enhanced civic space in front of Trinity College.

4.19.1.6 Modal Split

The modal split figures available relate predominantly to the city centre area. The change in modal split for the city centre over the last decade has seen a rise in the use of public transport. Between 1997 and 2014 private car commuters reduced from 49.85% to 33.3% of the a.m. modal split. Over the same period, the public transport mode share rose from 34.91% to 48.38%.

Between 2006 and 2014, the NTA reports that bus passenger numbers declined from 59,874 to 56,671 at peak time. Bus share is now at 29.41% of the modal split. Rail passengers decreased over the same period from 33,534 to 24,866, with rail at 12.91% of the modal split. When Luas is included the total rail mode split comes to 19.01%. Cyclist numbers have increased from 4,839 in 2006 to 10,349 in 2014 at peak time. Cyclist numbers have been steadily increasing over the nine-year period. See **Box 4.1** for details of the modal split over this period.

Box 4.1: Modal Share for the City Centre 2006–2014

Mode	2006	2007	2008	2009	2010	2011	2012	2013	2014
Bus	59,874	57,201	60,438	56,168	50,420	54,251	52,007	56,177	56,671
Rail	33,534	35,692	32,324	25,723	23,580	22,932	23,999	24,969	24,866
LUAS	9,029	9,171	9,242	8,776	9,111	9,949	10,014	10,835	11,670
All Public Transport	102,437	102,064	102,004	90,667	83,111	87,132	86,047	91,981	93,207
Car	76,850	71,597	67,732	71,043	71,978	69,681	68,626	68,072	64,169
Taxi	1,453	2,154	1,930	2,739	2,260	2,674	3,271	3,111	2,775
Walk	17,114	18,594	18,360	14,618	15,092	14,551	17,070	17,495	19,711
Cycle	4,839	5,676	6,143	6,326	5,952	6,870	7,943	9,061	10,349
Goods	2,291	1,445	1,223	1,087	993	1,176	1,099	1,045	1,087
Motorcycles	2,395	2,429	2,375	2,060	1,656	1,485	1,425	1,423	1,372
Total Person Trips	207,379	203,959	199,767	188,540	181,042	183,569	185,481	192,188	192,670

Source: Report on trends in mode share of vehicles and people crossing the Canal Cordon 2006–2014, National Transport Authority and Dublin City Council (2015)

The 16.5% plus shift away from private cars has been achieved through increased public transport supply but also through pro-active travel demand management policies. The removal of free parking in the city and restrictive parking policies has been particularly influential in achieving a shift to more sustainable forms of transport.

4.19.2 Environmental Monitoring

The following information is available which can assist in monitoring the environment from a

movement point of view. Some monitoring is carried out on an annual basis for the same area. Other information is ad hoc and relates to particular sites or junctions.

- Annual Cordon Counts (for all modes crossing the canals);
- Traffic Counts – carried out on an ad hoc basis and relate to particular junctions/streets etc.;
- Traffic Impact Assessments and Transport Assessments on a site basis;
- Mobility Management Plans – on a site basis;
- ITS – day to day monitoring of junctions and pedestrian crossings by Dublin City Council and a contractor; and
- Noise and Air Pollution Monitoring – there is an existing plan, the Dublin Agglomeration Action Plan Relating to The Assessment and Management of Environmental Noise 2013–2018. This action plan will be reviewed on a five-year basis.

There are several large-scale projects that will effectively transform the city and its movement networks over the next few years. These projects will have significant effects on the environment.

There were several proposals as part of the Transport 21 infrastructure plan of national and regional importance. Transport 21 has since been superseded by the National Transport Authority's Draft Transport Strategy for the Greater Dublin Area 2015–2035, in order to guide policy to 2035. This strategy builds on previous strategies and schemes and also includes several potential major infrastructure schemes previously included in Transport 21, including:

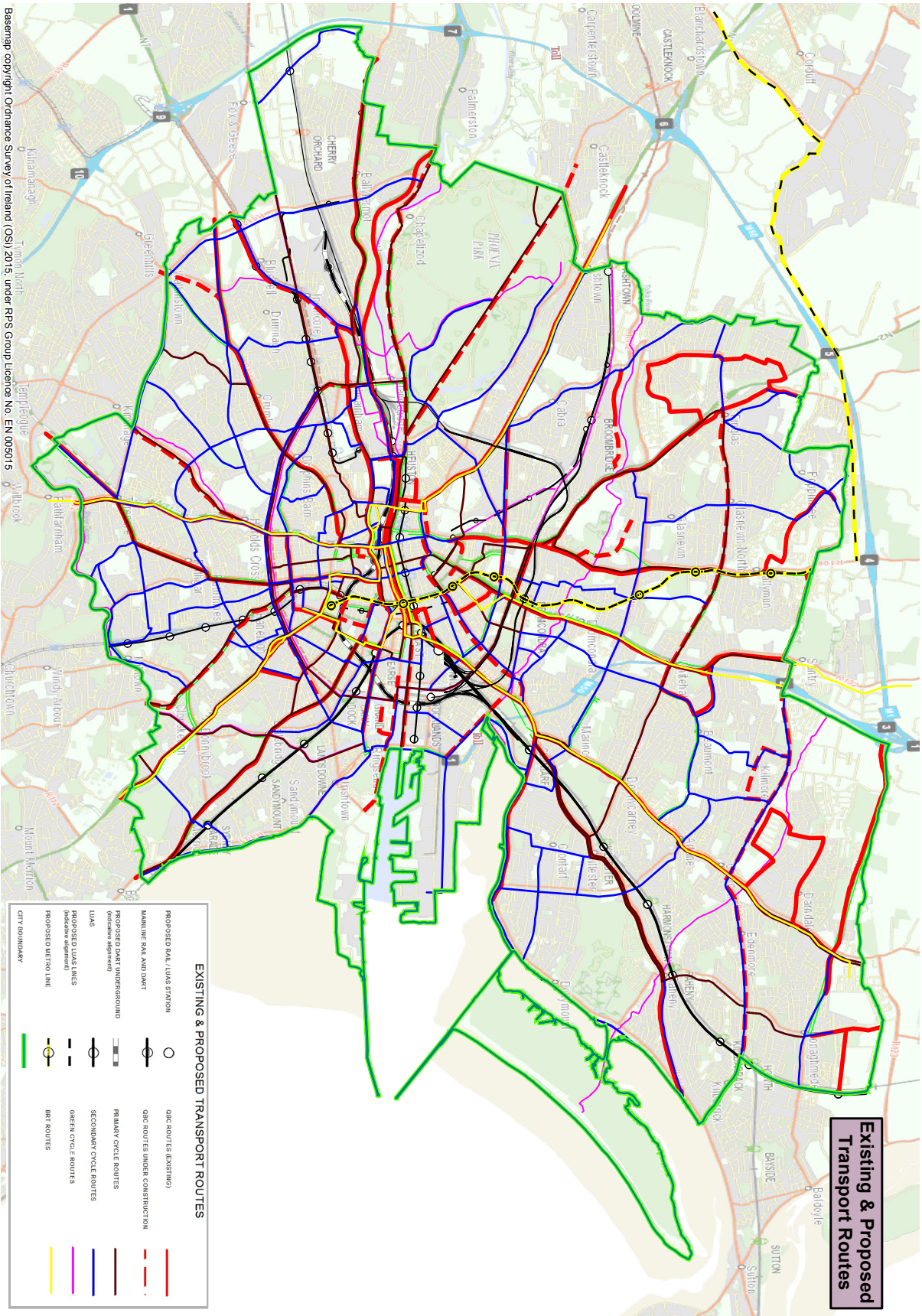
- Light rail options (e.g. Metro North and Metro West)

- Further extension of the Luas network (Luas Cross City) and Luas upgrades
- DART underground
- Enhancement and extension of the Quality Bus Corridor network.

Following economic difficulties over the past number of years, planned upgrades and new schemes for the public transport network have been modified or delayed, with some objectives taking longer to achieve. Interim measures have been proposed such as the planned Bus Rapid Transit routes to areas that are intended to be eventually be served by Metro routes.

The Metro North was a key deliverable of Transport 21 and is heavily referenced in the Swords Masterplan for serving the public transport needs of the Swords area (located in Fingal County). Swords is intended to become the county town for Fingal and given its proximity to Dublin Airport, a major new infrastructure linkage between the two and connecting into Dublin city centre is inevitable. The Fingal/North Dublin Transport Study was thus developed to help ensure the needs of the Swords/Dublin Airport to city centre corridor option are met by the study's horizon year of 2035. The development of this public transport option into the city is vital given that the population in the Greater Dublin Area is predicted to continue growing, travel by car is still the dominant mode of transport and the government's push for a modal shift away from private cars to public transport options. A number of options are being proposed that could provide this necessary infrastructure link such as heavy rail, light rail, e.g., Metro North, bus rapid transit, e.g., Swiftway, as well as a combination of these modes. The shortlisted options from these solutions went to public consultation in late 2014/early 2015 and the NTA is

Map 4.12



currently in the process of identifying a preferred route option.

A number of measures are also proposed in the Dublin City Transport Study (2015) in order to combat rising congestion levels.

They include:

- A rebalancing of road space and junction capacity to enable increased public transport provision;
- The introduction of the high-capacity Bus Rapid Transit (BRT) system;
- Increasing the frequency and capacity of the DART;
- Running new rail passenger services between Kildare and the Grand Canal Dock area through the Phoenix Park Tunnel;
- Enhancing interchange opportunities between modes at key points across the city;
- Developing a high-quality cycle network in the city centre;
- Improving pedestrians' experiences with wider footpaths and crossing priority at key junctions; and
- Reorganising city centre space for taxis and for coach-parking.

These projects will provide significant increased capacity on the public transport network. **Map 4.12** outlines existing and proposed transport options in Dublin City and **Map 4.13** outlines the Fingal/North Dublin Transport Study area.

At a regional/inter-county level there are also projects/plans coming on stream, which will influence the environment of the Dublin City Council area. These include the Sandymount/Merrion Road to Blackrock Corridor Study (S2S project), which is expected to run along the east coast.

The implementation of the City Centre Transportation Plan will impact significantly on the environment of the city centre. The Dublin Bikes Scheme and the Wayfinding project will also influence the environment of the city centre.

Collaboration with communities, schools and workplaces can contribute to modal shift and changing how people travel day to day. Projects in Dublin city include 'Hike It, Bike It, Like It, Drimnagh!' and the Green Schools initiative run by An Taisce encourages walking and cycling to school and contributes to environmental sustainability.

Provision of car parking is a necessity in a city and part of effective land use policy. Current policy in Dublin city is to restrict parking and to encourage other forms of public and pedestrian transport, given that the city is well-served by public transport networks.

4.19.3 Non-implementation of the Dublin City Development Plan

From a movement point of view, the Dublin City Development Plan will continue to promote a shift away from private car use towards more sustainable forms of transport. It will support a redistribution of road space away from the private car to accommodate this. In the absence of the plan and its proactive policies, it is likely that the city will continue to be congested by private cars. It is also likely that noise and air pollution would continue to increase.

The absence of the Plan would result in the loss of potential for modal shift to public transport, cycling and walking. An increased modal share for these modes would contribute to a reduction in pollution, GHG emissions and a healthier city environment generally.

Map 4.13: Fingal/North Dublin Transport Study Area



Source: Fingal/North Dublin Transport Study Stage 1 Appraisal Report (NTA and Aecom, 2014)

The most significant environmental problem experienced in the area of movement and transport is that of traffic congestion. Traffic contributes substantially to noise and air pollution in the city. It also poses health and safety risks where conflicts may arise between different road users. In Dublin city, transport accounts for 25% of the primary energy consumption and 26% of CO₂ emissions. It is currently a significant challenge to shift from private transport to public and pedestrian alternatives, given that the proportion of commuters travelling to work by car increased during the last inter-censal period 2006–2011.

4.19.4 Waste Management

National waste policy is well established in Ireland with the foundation laid in the publication of *Changing Our Ways* in 1998. At the core of this national policy statement is the EU Waste Hierarchy with a preference for the prevention, reuse and recycling, including biological treatment, of waste ahead of energy recovery and landfill disposal. The waste sector was estimated to account for 2.5% of total greenhouse gas emissions in 2013.¹⁸

The Waste Management Plan for the Dublin Region 2005–2010 originally set out the current regional policy framework for Dublin to progress the sustainable management of waste arising in the Region to 2010. The Waste Framework Directive was transposed into Irish law by the European Communities (Waste Directive) Regulations 2011. This led to a need to prepare new Waste Management Plans. The waste planning framework was

reshaped to allow for greater efficiencies in the plans and to better reflect the movement of waste. As such, the previous 10 waste regions were consolidated into 3 regions: Eastern-Midlands, Southern and Connacht-Ulster. Dublin city falls within the Eastern-Midlands Waste Region, with the Regional Waste Plan (2015–2021) for this region being published in 2015, as shown in **Photo 4.2**. Dublin City Council is the lead authority for the Eastern-Midlands Region. The strategy of the Waste Plan is to promote the idea of a circular economy and to rethink the approach to managing waste by viewing waste streams as a valuable resource.

Over the lifetime of the Eastern-Midlands Regional Waste Plan, the main objectives are: a 1% reduction per annum per capita in the amount of household waste generated; the elimination of direct disposal of unprocessed residual municipal waste to landfill; and a reuse/recycle target of 50% of municipal waste by 2020.

In 2012 the total quantity of household waste generated in the Eastern-Midlands Region (excluding unmanaged waste) was 694,441 tonnes, 1,190,887 tonnes of household and commercial waste was reported and for C&D waste 1,190,887 tonnes was reported. In 2012 approximately 626,692 tonnes of municipal waste was disposed to landfill in the Eastern-Midlands Region.¹⁹ See **Table 4.8** for the most recent breakdown of waste streams and tonnages for the Region.²⁰

¹⁸ Ireland's Provisional Greenhouse Gas Emissions in 2013. EPA (2014)

¹⁹ National Waste Report. EPA (2014).
²⁰ Eastern-Midlands Regional Waste Management Plan 2015–2021.s

Table 4.8: Tonnes Waste Arising in the Eastern-Midlands Region, 2011–2012

Priority Waste Types	Total (tonnes) 2011 for the Eastern-Midlands Region	Total (tonnes) 2012 for the Eastern-Midlands Region
Household (Excluding Unmanaged)	707,276	694,441
Construction and Demolition	2,048,344	1,910,887
Waste Electrical/Electronic (Both Household and Non-household)	29,254	33,068
Batteries (Portable)	199	232
Batteries (Non-portable)	7,912	7,194
End of Life Vehicles	25,530	29,182
Waste Tyres	12,689	10,374
Healthcare	20,788	15,761
Waste Oils	34,445	37,363
Polychlorinated Biphenyls (PCBs)	195	152
TOTAL	2,886,632	2,738,654
Other Waste Streams	Total (tonnes) 2011 for the Eastern-Midlands Region	Total (tonnes) 2012 for the Eastern-Midlands Region
Contaminated soils	6,594	13,133
Mining and Quarry	33	113
Agricultural	28,461	11,331
Non-hazardous Industrial	78,342	105,980
Hazardous Industrial	17,414	30,499
Industrial Sludges	9,168	2,648
Ash and Incinerator Residues	5,435	44,348
Landfill Leachate	175,291	236,396
Water Treatment Sludge	30,080	43,933
Sewerage Sludge	226,433	227,998

The aim is for the region to become, as far as possible, self-reliant in terms of waste management and to this end the development of centralised biological treatment, materials sorting and waste-to-energy facilities are underway. There has been a significant shift away from landfilling as a waste disposal option, in the Eastern-Midlands Region and nationally. As of 2014 there were only two active landfills in the region – Ballynagran and Drehid. In general, the quantity of municipal waste disposed nationally to landfill continues to fall and dropped 24% between 2011 and 2012. Prevention and minimisation, which aim to reduce waste at source, are at the top of the waste hierarchy and remain a priority with resources dedicated to awareness campaigns.

Dublin city's waste collection is undertaken by both private operators and the local authority and includes the following kerbside services: residual, mixed/dry recyclable and segregated glass collections. The provision of brown bins has allowed for the separate collection of organic waste (food waste and light garden waste). Collected organic waste is treated biologically by a third party contractor and a nutrient-based compost is produced which is used by landscapers and tillage farmers. The amount of household waste organic waste collected at kerbside or brought to civic amenity sites for Dublin City was 15,164t in 2012 representing a slight reduction when compared to 16,675t in 2011.

The total amount of collected household waste and brought household waste reported for Dublin City Council was 142,889 tonnes in 2012. Waste collected at bring banks accounted for 11,531t of this waste and civic amenity sites accounted for 3,036t.

Recycling remains central to the waste plan. The regional materials recycling facility (MRF) at Ballymount in Dublin 12, operated and managed by Dublin City Council, became operational in 2009 and processes green bin recyclables for the four Dublin local authorities. The regional MRF is designed to cater for the processing of green materials in the Dublin area and the facility has a capacity of 100,000 tonnes per annum.

An issue for recycling is developing recyclable markets given that most materials are exported to foreign markets for reprocessing and recycling, as the quantities generated in Ireland do not provide the necessary economies of scale for indigenous reprocessing. The preference under the new Regional Waste Management Plan is to support national and regional self-sufficiency through

Photo 4.2: The New Waste Plan for the Eastern-Midlands Region, 2015–2021



development of indigenous, competitive and energy-efficient treatment facilities in Ireland to ultimately minimise the export of residual waste for processing and recovery abroad.

As energy recovery is part of the management plan, the region will thermally treat residual municipal and industrial waste which cannot be recycled with a new waste to energy plant (approximately 5.5 hectares) in Poolbeg. The facility will be able to handle up to 600,000 tonnes of municipal waste annually. The facility will produce energy to meet the needs of approximately 80,000 houses in the form of energy supplied to the national grid and will also have the capacity to provide district heating for up to 50,000

homes. A grid connection application was lodged with the ESB in June 2008. The project received planning approval from An Bord Pleanála in November 2007, was granted a waste license by the EPA in 2008 and received authorisations from the Commission for Energy Regulation in 2009.²¹

Dublin City Council's current Litter Management Plan is being reviewed and it is intended for a new plan to be developed for the period 2016–2018. The current plan deals with litter under five main headings: prevention and awareness, responsibility and partnership, litter management and cleaning, graffiti and enforcement.

4.19.5 Existing Environmental Issues Relating to Material Assets in Dublin City

The following broad range of issues has been identified for transport. These include localised as well as more strategic issues:

- Traffic congestion.
- The critical need to further integrate transport and land use in a timely manner.
- Long lead in time until delivery of Greater Dublin Area '2035 Vision' projects.
- Sustainable travel patterns, i.e., need to motivate greater numbers of people to cycle, walk or use public transport including regional initiatives such as the Sandymount/Merrion Road to Blackrock Corridor Study (cycle route).
- Need to accommodate the needs of public transport, pedestrians, cyclists and the private vehicles given the city's limited road space.
- Importance of the national road network and other road infrastructure to the

economy and connectivity within the Dublin region.

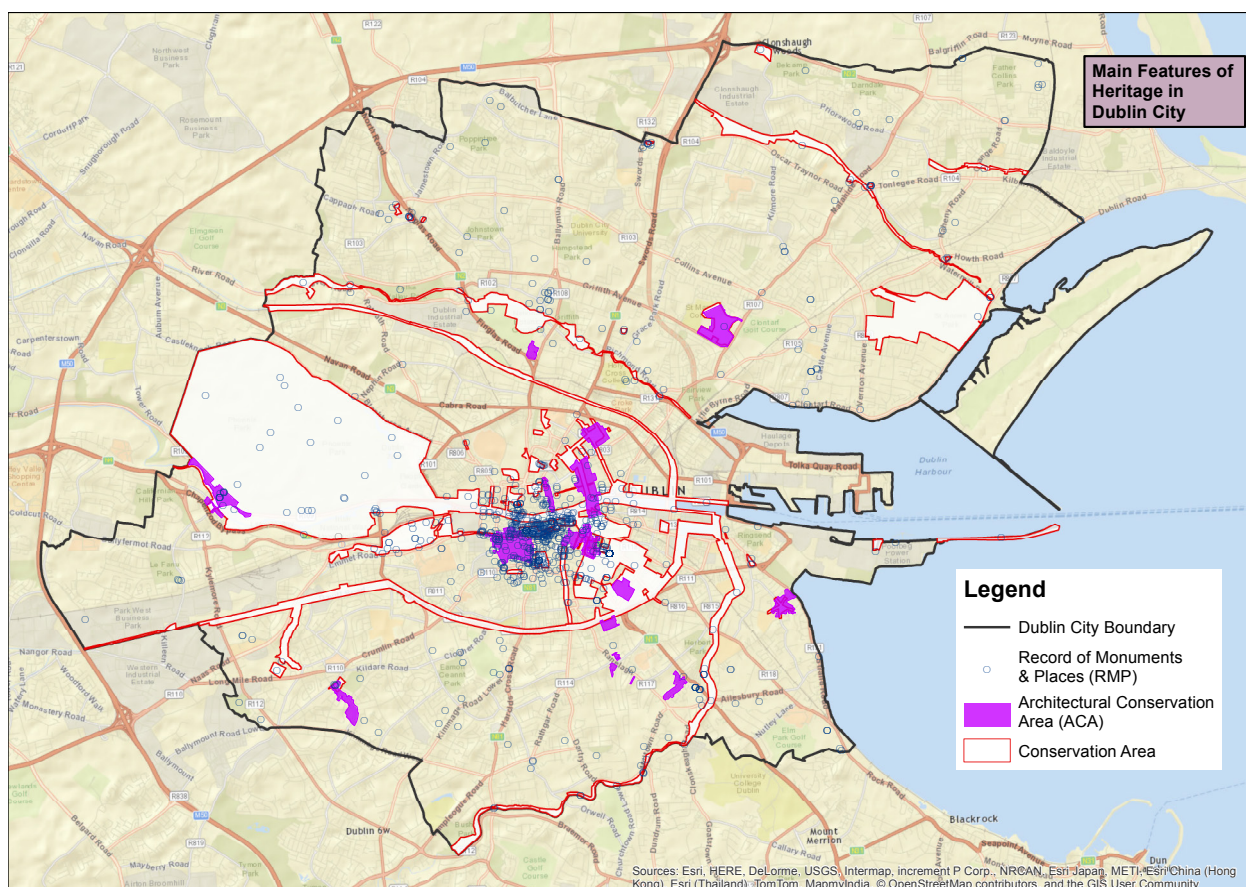
- Safe, good quality and attractive streets are key.
- Requirement for ease of movement of people, goods and services in the city.

The following broad range of issues has been identified for waste management in Dublin city. These include localised as well as more strategic issues:

- Contribute to meeting the strategic Eastern-Midlands Regional Waste Plan Targets.
- Reuse of materials rather than the use of new materials in development; whether in any development, the planning authority should insist on a proportion of building materials being recycled materials such as concrete, brick or stone.
- Use of renewable materials and those low embodied energy materials and low toxic materials: whether in any development, the planning authority should insist on a proportion of materials being from renewable sources.
- Understand biowaste is a valuable resource and encourage its recycling.
- Continued encouragement of reuse, up-cycling and recycling and a move away from landfill.
- Waste issues related to the entire Eastern-Midlands Region as well as Dublin City include:
 - The assessment of historic and unregulated legacy landfill/illegal dump sites.
 - Lack of a third or fourth bin in some areas which would allow for better segregation of waste.

²¹ Dublin Waste-to-Energy project website: <http://dublinwastetoenergy.ie/>

Map 4.14



- ❑ Illegal waste storage and non-compliant businesses (regionally and nationally).
- ❑ Inconsistencies in the classification and thus inappropriate disposal of construction and demolition waste as mixed or municipal waste, given the significant potential for recycling this material.
- ❑ Current over-reliance on the export of residual waste streams abroad for processing and recovery.
- Assessment of whole life environmental impacts needed.
- Whether residential and commercial developments are providing sufficient quantity and high quality recycling

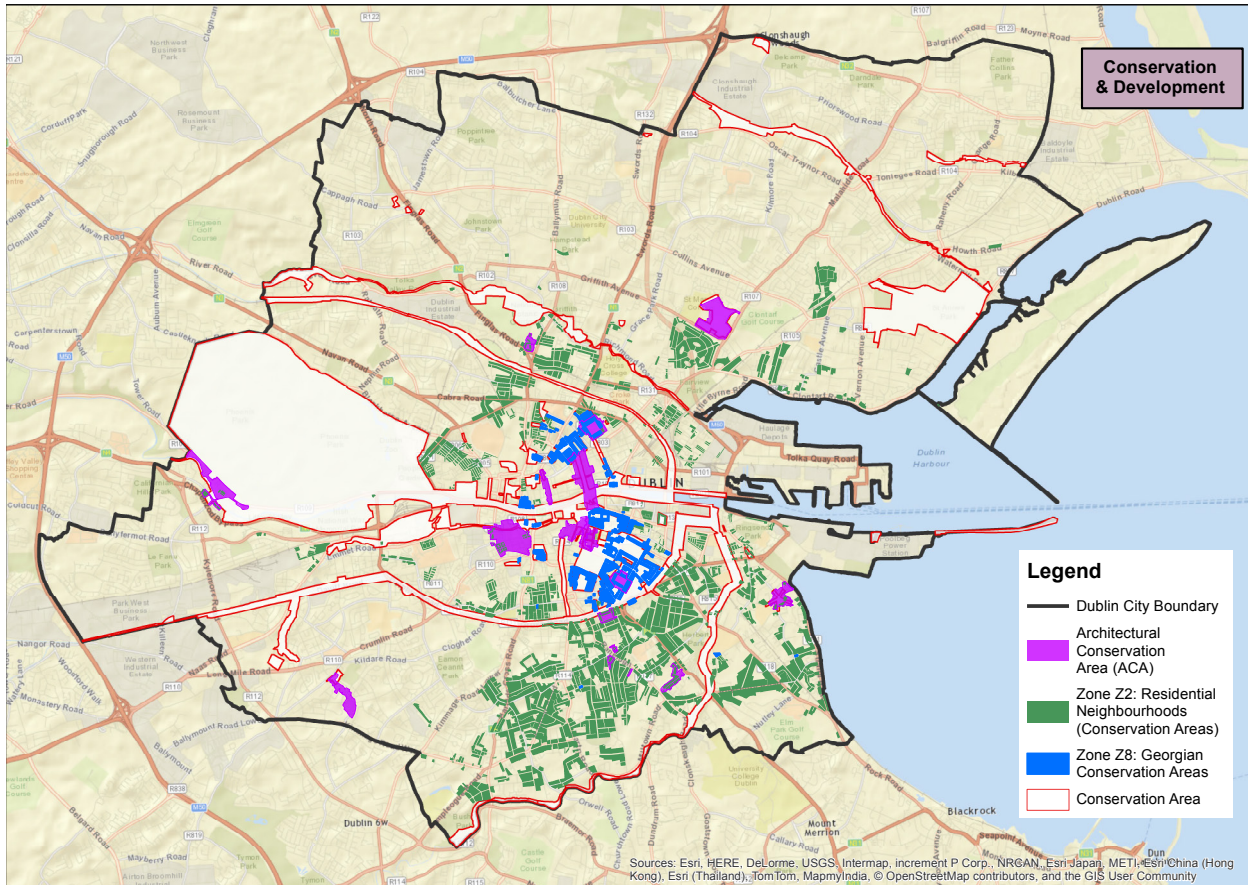
facilities for waste sorting located conveniently for collection.

4.20 Cultural Heritage (including archaeological and architectural heritage)

Dublin is an ancient city with many sites of archaeological, architectural and cultural heritage importance. As a vibrant and expanding city, there is a continuing need to balance day to day operations with protection of the cultural resource that is so much a part of the fabric of Dublin and one of the key draws for our tourism industry as shown in **Map 4.14**.

Within Dublin city, there are a number of methods to protect the integrity of cultural

Map 4.15



assets including appropriate zonings, Architectural Conservation Areas (ACAs), Record of Protected Structures (RPS), Record of Monuments and Places (RMPs), Listed Buildings and Conservation Areas (for example along the Liffey Quays), as shown in **Map 4.15**.

Conservation grants are available to owners of protected structures and particularly to owners of protected structures which are on the Buildings at Risk Register. Dublin City Council works with outside agencies, e.g., DECLG and the Heritage Council, to protect the cultural heritage resource of Dublin city.

4.20.1 Record of Protected Structures

There are currently just over 9000 structures listed for protection in the Record of Protected Structures; Dublin City Council is

currently revising and updating this register. These structures include individual houses, warehouses, shop fronts, churches, boundary walls, bridges, building exteriors etc. A considerable number of these buildings are considered to be of Local Importance under the National Inventory of Architectural Heritage (NIAH) Guidelines.

In addition to the Record of Protected Structures, structures of architectural heritage merit, although not put forward for inclusion in the Record of Protected Structures (RPS) may be of local value and may continue to contribute to the identity of a particular area of the city. The development plan seeks to actively protect buildings/structures of heritage value, which may not be protected, but which make a positive contribution to the area and identity

of the city. Dublin city is unique in form and character. The contributions of any features, which give identity to and enhance that uniqueness, have been given recognition in the preparation of the Plan.

4.20.2 Architectural Conservation Areas

An Architectural Conservation Area (ACA) is a place, area, group of structures or townscape, taking account of building lines and heights, that is of special architectural, historical, archaeological, artistic, cultural scientific, social or technical interest or that contributes to the appreciation of a protected structure, and whose character is an objective of a Development Plan to preserve.

There are currently 14 ACAs in Dublin city and these include: O'Connell Street, Grafton Street and environs, Prospect Square – De Courcy Square, South City Retail Quarter, Dartmouth Square and environs, Marino, Capel Street and environs, Marino Casino, Thomas Street and environs, Chapelizod and environs, Fitzwilliam Square and environs, Mountjoy Square, Westmoreland Park, Sandymount, Temple Place, Colliers Avenue, Elmpark Avenue and Elmwood Avenue, Ranelagh Avenue and Crumlin. The O'Connell Street ACA and Grafton Street and environs ACA are also areas of special planning control, which allows the council to specify development objectives to preserve and enhance these areas. Future areas of architectural conservation for consideration may include areas of civic and or industrial heritage importance.

Dublin experienced major development and expansion during the Georgian period (1714–1830) and has a rich heritage associated with this time. There are two main concentrations of Georgian architectural heritage within the city – the North Georgian Core (Parnell Square environs) and the South Georgian Core

(Fitzwilliam Square environs). Both cores have been the subject of regeneration proposals. However, care must be given to encouraging suitable uses so as to avoid inappropriate residential subdivision in the North Core, but conversely to encourage a policy approach to encourage residential use to become common again in the South Core, given the central locations of each.

Conservation initiatives are also implemented on individual structures where they have particularly unique uses or typify a social stratum, for example, the repair of the Mansion House and the renovation of the north inner city Fruit and Vegetable Market.

It is challenging to have regard to the sensitive in-fill of sites where contemporary design is utilised, given the architectural and historic context of an area.

4.20.3 Residential Conservation Areas

Lands zoned Z2 in Dublin City Council's 2016–2022 Development Plan consists mainly of housing areas, but also in limited cases can include a limited range of other secondary and established uses. These residential conservation areas have extensive groupings of buildings and associated open spaces with an attractive quality of architectural design and scale. The general objective for such areas is to protect them from unsuitable new developments or works that would have a negative impact on the amenity of architectural quality of the area.

4.20.4 Conservation Areas

Lands zoned Objective Z8 in Dublin City's Development Plan; incorporate the main conservation areas in the city, primarily the Georgian squares. The aim of this zoning objective is to protect the architectural design and overall setting of such areas.

4.20.5 Conservation Areas

In addition to the Z2 and Z8 zoned areas of the city, conservation areas are also delineated on the accompanying zoning objective maps for the Plan. The river Liffey and its quays is a designated conservation area.

4.20.6 Archaeology

Dublin City Council is rich in archaeology and has a diverse range of monuments covering a number of historic eras. It is deemed that the plan area is of high archaeological potential due to the potential for the presence of hitherto unknown sub-surface archaeological remains. This determination is based on the presence of substantial archaeological remains from many periods of the past within the city area. Dublin originated first as two separate monastic enclosures (Átha Cliath and Linn Dubh), and then as a fortress for Viking ships on the Liffey. After the Anglo-Norman invasion of 1170, the walled city expanded reclaiming land at wood quay and large suburbs developed to the north (Oxmantown), to the south and west around Ship Street and St Patrick's Cathedral and the Liberties. On the outskirts were villages such as Chapelizod, Finglas and Donnybrook, etc. Much of the medieval city was still intact in 1610 when John Speed mapped it for the first time. During the eighteenth century however, the Wide Streets Commission reshaped the old medieval city, and created a network of main thoroughfares by wholesale demolition or widening of old streets or the creation of entirely new ones. The result is that it is difficult to grasp the form of the old city or to understand the context of surviving medieval fabric/street patterns at ground level. Nevertheless, much remains that is of value and which can be reinforced or stitched back together and presented in

the city's renewal. A clear strategic vision is required for the oldest part of the city. The City Walls Conservation Plan goes some way to addressing this but should be extended to address the suburbs as a second phase.

Given the limited development in recent years, there have been fewer opportunities to conduct archaeological investigations, given the likely presence of sub-surface archaeology. Church curtilages are important historical resources and can often be used for recreation and amenity purposes as well however this may also lead to the disturbance of archaeological features.

The Dublin City Heritage Plan is integrated as part of the Plan which works to identify and enhance the city's heritage. Various projects were launched under the plan, including the assessment of Dublin's historic centre for UNESCO heritage designation, the Architectural Study and Inventory of Twentieth Century Architecture and Historic Street Surfaces Guidance.

4.20.7 Industrial Heritage

Ireland's industrial heritage is being changed and destroyed at an unknown rate. Over the past number of years there has been a growing public awareness of Ireland's industrial heritage, as seen in a number of sites that have been restored by enthusiasts and are now open to the public as tourist and educational attractions. The Royal Canal in Dublin city is an example of tourist and educational attraction based on industrial heritage in Ireland.

From around 1750 onwards, numerous large-scale industries developed in Dublin which had a profound effect on the city's economy and society, and which contributed

greatly to the physical character of the city today. The term 'industrial heritage' covers everything from the extraction of raw materials, manufacturing and processing into usable forms or finished products, public utilities, transport, communications and energy production. In some contexts it also includes military maritime and institutional functions. It is an aim of the plan to minimise interference in original maritime and transport-related heritage in order to protect docks, quays, sea walls and historic industrial fabric where possible.

The importance of industrial heritage in the shaping of Dublin city cannot be underestimated. The Guinness Brewery is one of Dublin's most important industrial heritage sites and Guinness is identified as a significant brand internationally and is inextricably linked with the capital. With the exception of Guinness however, industry is currently a critically underutilised and undervalued aspect of Dublin's built heritage.

A key issue in the conservation of the city's built heritage is recording and conserving Dublin's unique industrial heritage, a substantial portion of which has already disappeared without record. Industrial buildings are not always of high architectural significance and so are poorly represented on the Record of Protected Structures for this reason. The National Monuments Act (amended) protects sites and monuments down to, but not after, 1700 AD. In this way, industrial heritage has continually fallen between the two primary statutory instruments for protection of built heritage. Dublin City Council has undertaken an inventory of industrial heritage. The Dublin City Industrial Heritage Record (DCIHR) and the Development Plan have regard to this record.

4.20.8 UNESCO World Heritage

To build on the city's civic identity, the historic centre of Dublin city is currently on Ireland's Tentative List of UNESCO World Heritage Sites. Dublin City Council and the Heritage Council are working on an agenda which seeks to identify the sociological and cultural characteristics which are unique features of Dublin.

4.20.9 Protection of the City's Cultural Heritage

The 2016–2022 Development Plan contains a policy to protect the buildings and features of industrial heritage in situ, and their related artefacts and plant where appropriate. Until 2005 there had been no accurate public record of these sites and many have been demolished without being recognised as worthy of record. Such loss cannot be sustained going forward. It has resulted in a cultural deficit and a loss or degradation of character.

There is a continuing need to balance the needs of a consolidating city with the need to protect its cultural character. The retention and adaption of historic buildings must proceed, while protecting their intrinsic character. Dublin's tourism industry relies heavily on its built heritage.

In the northern part of the city, some of buildings in the Georgian squares and nearby historic streets are suffering from vacancy and underuse. Parts of the Liberties are similarly affected. Such areas would benefit from greater investment and enhancement. In addition, the upper floors of some protected structures are vacant or underutilised in successful commercial streets. These problems are likely to worsen if investment and initiatives are not forthcoming.

A key issue for the city's built heritage is recording and conserving Dublin's unique

industrial heritage. The network of the city's churches and graveyards represents an important aspect of its character. While some of the deconsecrated churches and graveyards have been maintained and managed as public parks, some are used as pocket parks resulting in the removal of monuments from their contexts, while many have suffered from vandalism or have been landscaped inappropriately, resulting in further heritage loss.

4.20.10 Key Projects Likely to Influence Cultural Heritage in the City

- Recording and conserving of Dublin's unique industrial heritage; and
- Additional Architectural Conservation Areas designated in the city.

4.20.11 Evolution of Problems in the Absence of the Development Plan

The 2016–2022 Dublin City Development Plan will continue and build on the policies of the 2011–2017 Plan in relation to built heritage. More ACAs will be initiated in tandem with reviewing the numbers of RPS on the current listing.

The absence of the plan and its policies would result in a potential loss of historic fabric and character to the condition of protected structures and bring about a lack of standards for redevelopment of these sites and heritage areas. This in turn would lead to a loss of irreplaceable fabric, to the detriment of existing and future generations and also to visitors to Dublin.

4.20.12 Environmental Issues Affecting Cultural Heritage

The following broad range of issues has been identified for cultural heritage in the city. These include localised as well as more strategic issues:

- Impact of major infrastructural projects on protected structures;
- Difficulty/expense in providing thermal protection to protected structures;
- Excavation of rear garden areas of protected structures, to provide underground accommodation;
- Excessive parking in the front gardens of protected structures;
- Loss of urban fabric due to insensitive development.

4.20.13 Environmental Sensitivity Mapping

Environmental sensitivity mapping is a useful tool for identifying at a strategic level (in this case at the extent of a capital city) environmentally sensitive areas. Such sensitivity mapping can be seen as being based on the principles of SEA by presenting a visual overview of the relative sensitivity of areas, particularly where they overlap, in order to provide a more strategic and informed approach to planning and the selection of alternatives; sensitive environmental receptors have less capacity to absorb changes to their conditions. An Environmental Sensitivity Map (ESM) has thus been compiled for the Dublin City County administrative area (see **Map 4. 16**).

The environmental factors which have been considered in compiling the ESM for Dublin city are summarised below and cover a range of categories from biodiversity and water to landscape and cultural heritage:

- European ecological designations, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs);
- National ecological designations such as proposed Natural Heritage Areas (pNHAs);

- Dublin City Parks Biodiversity Survey and habitat mapping;
- Tree preservation orders (TPOs);
- Rivers and canals;
- Flood zone ('A' and 'B') extents;
- Water quality and groundwater vulnerability;
- WFD Register of Protected Areas;
- Special Amenity areas and parks/open spaces;
- Record of Monuments and Places (RMP);
- Architectural Conservation Areas (ACAs); and
- Geological Heritage Areas (GHAs) and County Geological Sites (CGCs).

4.21.1 Sensitivity Mapping Methodology

The environmental factors above were assigned to a weighting category of High, Medium or Low. High sensitivity factors are assigned a weighting of 3 and include: SACs and SPAs; habitats and TPOs; Dublin City Parks high biodiversity areas; rivers and canals; flood zone 'A' extents; WFD Register of Protected Areas; poor water quality status; groundwater vulnerability rated high, extreme or 'X' (near karst or surface); Special Amenity Area Orders; RMPs; parks and open spaces.

Medium sensitivity factors are assigned a weighting of 2 and include: pNHAs; Dublin City Parks medium biodiversity areas; flood zone 'B' extents; moderate water quality status; groundwater vulnerability rated moderate; ACAs and conservation areas; GHAs and CGCs.

Low sensitivity factors are assigned a weighting of 1 and include: Dublin City

Parks low biodiversity areas; high water quality status; low groundwater vulnerability; good status groundwater bodies.

The weighted data was brought in to a geographic information system (GIS) to allow spatial overlay and calculation of the overall sensitivity. The colour scheme gives an indication of the relative sensitivity of the environment with darker red indicating high sensitivity and greys representing areas better able to absorb change. While it is acknowledged that there are limitations and an element of subjectivity to ESM, where there is a concentration of sensitive areas or overlap it becomes readily apparent where increased development in such areas could cause deterioration of the environment without appropriate mitigation measures being taken.

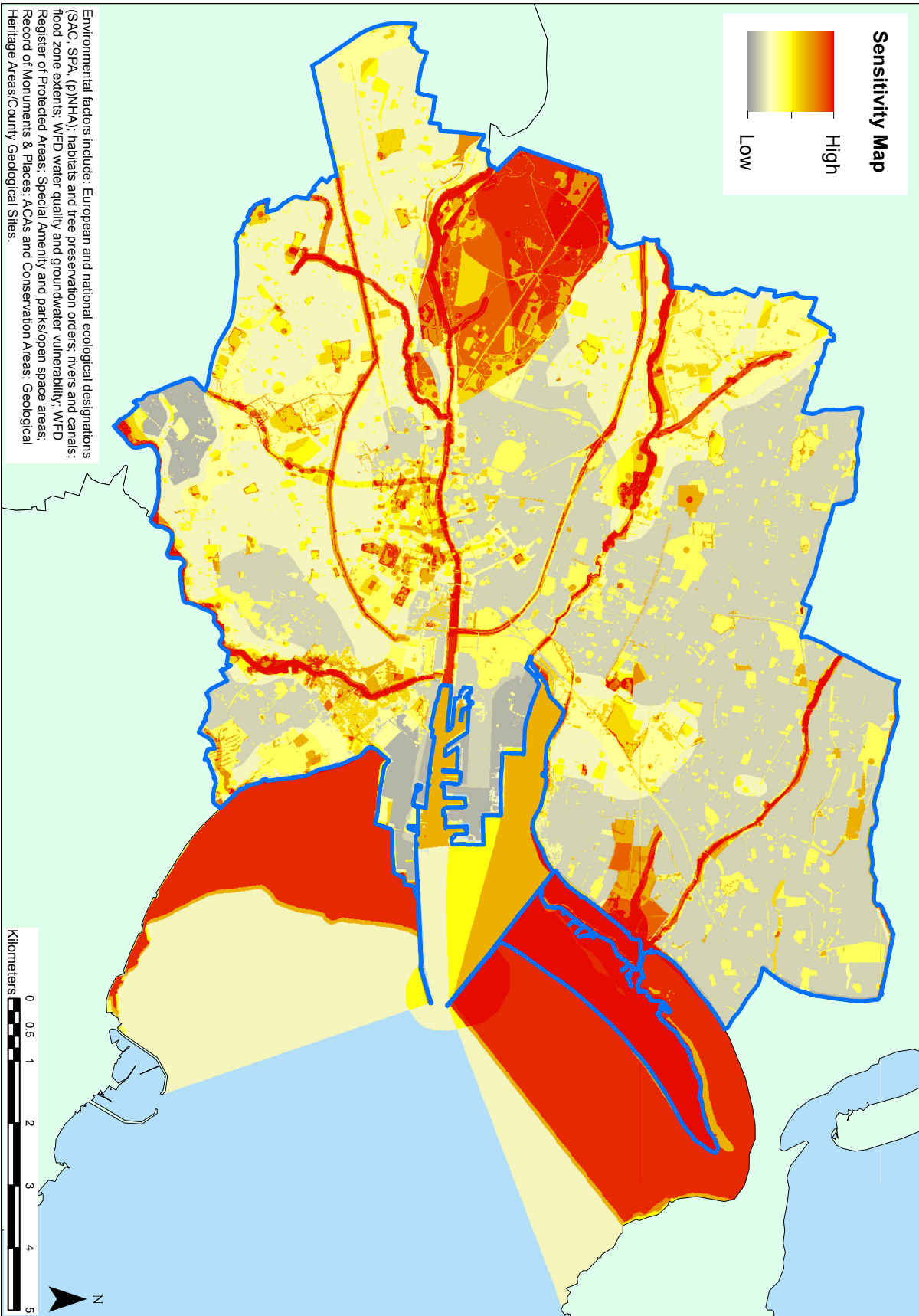
4.22 Data Gaps and Difficulties Encountered

Some data gaps and difficulties have been identified by the SEA inter-departmental team for various environmental receptors as follows:

Biodiversity, Flora and Fauna: There is a lack of up to date habitats surveys for Dublin city, as the last habitat mapping took place in 2008.

Climatic Conditions: The Baseline Emission Inventory for Dublin City Sustainable Energy for Action Plan 2010–2020 was the first attempt to quantify the energy and CO₂ emissions for the Dublin city area. The methodology and assumptions made in the document were satisfactory at the time, but have since been updated and revised by Codema in their first monitoring and progress report of the plan published in 2014, to reflect more recent data namely from the 2011

Map 4.16



census. With more accurate data on business types, employee numbers and floor areas, sectoral breakdowns and use of the SEAI's building energy rating (BER), the results for 2011 showed an overall significant decrease for 2011 compared to 2006. Continued monitoring of the progress of the Sustainable Energy Action Plan will yield more accurate results in the future, as updated data becomes available, especially with the introduction of new initiatives such as smart metering.

Up-to-date and relevant information depends on a number of agencies conducting research and compiling data for dissemination, such as SEAI, Department of Transport (plus other transport authorities) and the Department of Finance (plus other authorities). At present nearly all information is at the state level and at best provincial or regional level. This needs to be addressed so that there is accurate local information to aid processes such as SEA and policy documents.

Furthermore, the ecological footprint of Dublin city is unknown. Currently, the city council is considering a proposal to calculate same. This will assist in establishing baseline data and measuring progress over the lifespan of the Plan.

In December 2014 the EPA also published its annual report on Ireland's greenhouse gas emissions for the period 1990–2013 as part of Ireland's commitment under the Kyoto Protocol. This data is provisional and subject to refinement and revisions before final submission to the European Commission in the first quarter of 2015, however, it provides a useful baseline for understanding progress towards reaching targets and the data is continuously updated.

Material Assets: The following data gaps have been identified for Material Assets (transport):

- There is limited information available regarding traffic patterns for the Dublin City Council area. Annual Cordon Counts are undertaken for different transport modes at the canal cordons. This process provides very useful information regarding modal splits for the city centre. However, this information is not available for the area outside of the canals.
- The main general source of travel information comes from the census. This provides information on how people travel to work. The Census 2011 data is also now out of date and may no longer reflect current trends; the next census of population is due in 2016.
- While traffic counts are carried out for some junctions and streets within Dublin city, they are generally carried out on a project-need basis. They do not exist for all streets, are not carried out regularly and if they do exist may be well out of date.
- Pedestrian counts are generally not undertaken unless for specific purposes. As a result there is a dearth of information regarding pedestrian movements within the City Council area.

General Gaps/Difficulties Encountered:

- The lack of a centralised mapping database also posed some difficulties, particularly for GIS based maps, and those maps showing spatial data not normally held in the Planning and Economic Development Department.
- The lack of a centralised data source of environmental baseline information posed some difficulty for the process.

4.23 Key Interrelationships Identified between Environmental Receptors

The majority of environmental receptors interact with one another to some degree, however, only those interrelationships of significance were considered. **Table 4.9** identifies the main interrelationships arising in this SEA. In carrying out the environmental assessment these interrelationships have been taken into account during the assessment of the various alternatives and also formed a central consideration during the assessment of the potential impacts that may result from the Plan. The interrelationships between environmental topics have been addressed in the Environmental Report as they arise between each environmental receptor. A synopsis of some of the key interrelationships identified is set out below.

Table 4.9: Key Interrelationships Identified between Environmental Receptors

Environmental Receptor	PHH	BFF	W	AQ	CF	MA	CH	L
Population and Human Health (PHH)		X	X	X	X	X	X	X
Biodiversity, Flora and Fauna (BFF)	X		X	X	X	X	/	X
Water (W)	X	X		/	X	X	/	X
Air (AQ)	X	X	/		X	X	/	/
Climatic Factors (CF)	X	X	X	X		X	/	X
Material Assets (MA)	X	X	X	X	X		X	X
Cultural Heritage (CH)	X	/	/	/	/	X		X
Landscape and Soil (L)	X	X	X	/	X	X	X	

X Significant Interrelationship/Insignificant Interrelationship

Population and Human Health has some form of interrelationship between all of the other seven environmental receptors, e.g., people rely on water (potable) for drinking, for provision of food, e.g., fish and shellfish. Clean water is required for recreation and leisure. Environmental sound levels can contribute significantly to the health and quality of life for the population in Dublin city. Globally, humans are having dramatic effects on climate. On average a Dubliner releases 5.6 tonnes of CO₂ per year (2011 estimate). Dublin city currently (2011) consumes 10.14 TWh of primary energy per year.

Material Assets, Population and Human Health, Climactic Factors and Air also display key interrelationships. The transport sector is a major contributor to the emissions of air pollutants and greenhouse gases. The pollutant emissions emanating from vehicular sources are also those to which the public may be most readily exposed, and they present a considerable risk in terms of their potential to contribute to breaches in air quality standards in areas subject to heavy traffic.

Biodiversity, Flora and Fauna is another environmental receptor with a number of interrelationships between other environmental receptors as identified in the Dublin City Biodiversity Action Plan 2008–2012. Biodiversity/wildlife, the city and its people have always been interacting and continue to interact and respond to each other. Development patterns, traditional land uses and population changes can dictate the type of city spread which can also dictate the natural

heritage resource remaining. Dublin's geographical and topographical spread has also shaped the city. While the development of the city continues it is necessary to improve the management of nature to protect our natural heritage, habitats, plants and wildlife.

Biodiversity Flora and Fauna and Climatic Conditions display significant interrelationships. Vegetation acts as a carbon sink and plants and animals are used as indicators of climate change. Biodiversity can also provide other environmental services such as pollution control, flood attenuation and erosion prevention. Biodiversity can help reverse the negative impacts of climate change. Good coastal wetlands can improve protection against rising sea levels and healthy floodplains and other wetland ecosystems can limit the effects of river flooding. Rising sea levels combined with weather extremes are serious concerns for all coastal cities, including Dublin city. Soft areas of coast, such as Bull Island, can provide a buffer to such weather extremes. Retaining green spaces to absorb water, creating wetlands in coastal areas, allowing the build-up of sand dunes and minimising development along the coast are all actions arising from Dublin City Council's Climate Change Strategy 2008–2012. Furthermore, this issue is listed as a specific project in the Biodiversity Action Plan, i.e., to actively link biodiversity to wider sustainability issues such as flooding, climate change and waste. The Dublin City Sustainability Report (2013) recognises the need to sustainably manage park and open spaces for their biodiversity, recreation and amenity value.

Water and Biodiversity, Flora and Fauna also display critical interrelationships in the city. The designated sites of North Bull Island and North and South Dublin Bay

constitute part of the Irish and European network of protected areas for biodiversity as the bay supports habitats and wild bird populations of international importance. The waterways of Dublin City, including the Liffey, Tolka and Dodder, support a significant wildlife resource, including: otters, bats, Atlantic salmon, brown trout, sea trout and kingfisher (many of which are of European importance and for which strict protection is required). All of these waterways and their associated riparian/edge vegetation provide important feeding and commuting corridors for a range of species. Furthermore, the ecological value of these habitats is a resource for Dublin's citizens and also remarkable for such an urbanised city.

Landscape consists of the public and private landscape of the city. It fulfils an array of environmental, ecological, social, recreational and aesthetic functions of the developing city. Dublin City has significant green spaces through the provision of parks such as the Phoenix Park, St Anne's Park and a number of institutional lands, including Trinity College Dublin. The city's parks, institutional lands, private gardens and graveyards all contribute significantly to the biodiversity resource in the city. Remaining hedgerows, semi-natural grasslands and trees are of particular importance. The city's landscape and parks contain significant wildlife resources, including woodland, semi-natural grasslands and remnant hedgerows. In this way, Dublin's city's parks support species of local and national importance, including otters, bats, hedgehogs and kingfishers. The city's parks also play a significant amenity and educational role in the city.

Soils perform a number of key environmental, social and economic functions that are vital for life. It has a

socio-economic and environmental role as a habitat and gene pool, a platform for human activities (including food production), landscape and heritage and as a provider of raw materials. The function of soils in abating climate change is particularly important in a regional context for cities such as experiencing rapid growth beyond city boundaries as is the case in Dublin city. The conversion of greenfield sites and sealing of soils can release CO₂ into the atmosphere and further reduce areas of 'carbon sinks'. Soils contain about three times the amount of carbon globally as vegetation, and about twice that in the atmosphere.

4.24 Overarching Strategic Issues Affecting Dublin City's Environment

Following the scoping exercise, and the carrying out of the above baseline study it has been determined that there are a number of overarching environmental challenges which must be addressed. These are as follows:

- i. Given the limited space for development in the city, housing needs to be accommodated in a balanced and sustainable way through the appropriate utilisation of vacant lands available within Dublin City Council's administrative boundary; this will allow for consolidation and a compact city.
- ii. The treatment of drinking water is a major issue for the city and region, however, with the establishment of Irish Water it is hoped that key water and wastewater infrastructural projects will be implemented. The current water treatment plants are working to full capacity. While the Ballymore Eustace and Leixlip plants have been expanded the water supply network still suffers from bottlenecks and instances of demand exceeding supply.
- iii. Irish Water identified in its Project Needs Study (2015) that a new water supply source is critical for the Eastern Midlands Region in order to meet projected demands up to 2031 and beyond for drinking water. Currently the river Liffey is at its limit for safe abstraction, where 84% of water treatment capacity is dependent on the Liffey.
- iv. The existing wastewater treatment infrastructure in the Dublin Region is inadequate and the Ringsend regional wastewater treatment plant is currently working over capacity. Additional infrastructure must be constructed in order to avoid significant adverse impacts upon water quality, biodiversity, flora and fauna and human health. This includes expansion of the Ringsend plant to its full capacity and the construction of a new proposed wastewater treatment plant at Clonshagh in Fingal (currently in preparation for a planning submission).
- v. The European Union Water Framework Directive (WFD) required that all governments aim to achieve 'good ecological status' in all their natural waters by 2015. The river waterbodies monitored under the WFD in Dublin city are currently at 'moderate' to 'poor' water quality status, and are located at the downstream end of their catchments and receive the accumulated pollution from lands upstream.
- vi. There is a need to provide and secure the necessary corridors for utility infrastructure, including water supply and drainage. The accommodation of infrastructure will allow for a compact spatial pattern of development. It has been outlined by Irish Water that

- adequate water and wastewater infrastructure will be provided to service new developments as they are approved and built.
- vii. Increased flood risks arising from climate change and sea level rise need to be addressed through proper planning and risk management measures in accordance with national guidelines. There is also a need to ensure, through the implementation of measures such as Sustainable Urban Drainage Systems (SUDS), that changes in land use do not lead to increased flood risk. It is crucial to respond to climate change and to take account of increased flood risk due to changing weather patterns and extreme events. Flood risk assessment should be incorporated into all aspects of planning including urban design, flood resiliency of construction materials and in individual developments.
 - viii. There is a continuing need to ensure better integration of land use and transport which promotes more sustainable forms of transport, greater use of public transport as well as significant improvements in public transport to allow a significant modal shift away from private cars in particular. This will also have a positive impact on reducing transport-related GHG and particulate emissions
 - ix. Accommodation of the future development of the city must be balanced with the recreational, heritage and biodiversity needs of Dublin city.
 - x. Future development must also have regard to sensitive development which takes account of the city's unique landscape character, historic urban fabric and cultural heritage.
 - xi. The main issue in relation to waste management is the continued facilitation and development of recycling in Dublin city in order to divert waste from landfill. The 2013 and 2016 Landfill Directive targets are at risk of not being met without considerable policy effort. To this end, the Plan will have regard to the Eastern and Midlands Regional Waste Management Plan (2015–2021).
 - xii. Under the EU 20-20-20 Agreement (EU Climate and Energy Package), Ireland has agreed to reduce greenhouse gases by 20% by 2020. While Ireland as a whole is at risk of not being able to meet these targets, Dublin city's CO₂ emissions decreased 43% between 2006 and 2011, and the city is currently on track towards meeting its own target of a 20% energy reduction, and is aiming for the more ambitious target of 33% reduction by 2020. There is a continuing need to monitor emissions reduction progress and to continue initiatives and actions to lower emissions and energy consumption to meet and exceed targets.
 - xiii. Increasing volumes of traffic affect air quality and the acoustic environment. The main threat to air quality in Dublin city comes mainly from the transport sector in the form of oxides of nitrogen, PM₁₀ and PM_{2.5}. These emissions must be reduced by a modal shift to more sustainable modes of movement and transport, in particular a move away from the over-reliance on private cars to public transport options. The challenge is how to manage demand for limited road space and thus minimise traffic congestion, where possible, which leads to elevated air polluting emissions and increased noise levels.

05

Environmental Protection Objectives

5.0 Introduction and Background

SEA is set at a strategic level and therefore it is not possible for the baseline environment to be described (and assessed) in as much detail as could be done for a project-level environmental impact assessment. Instead, SEA uses a system of objectives, targets and indicators to rationalise information for the purposes of assessment, particularly for such strategic level Development Plans.

In order to streamline the assessment process, this report has used broad themes, based on the environmental topics listed in the SEA Directive, to group large environmental data sets, such as human health, cultural heritage and climate. Assigned to each of these themes is at least one high-level Environmental Protection Objective (EPO) that specifies a desired direction for change. These high-level EPOs are then paired with specific targets, as far as possible connecting to existing defined national or EU targets. The progress towards achieving these specific targets is monitored using indicators, which are measures of identified variables over time.

Following the scoping exercise, which included consultation and feedback from the environmental bodies, and the carrying out of the baseline study, a number of overarching environmental challenges have been identified which have been outlined in the baseline chapter. Identifying environmental problems is an opportunity to define key issues and Environmental Protection Objectives for each of the environmental receptors. Based on an understanding of existing and emerging environmental issues in an area, a series of EPOs have been developed.

5.1 Appropriate assessment

As previously outlined, the Plan has undergone screening for Appropriate Assessment (AA) in a parallel process to the SEA and a full Stage 2 Appropriate Assessment is being undertaken. The AA will specifically assess the likely impacts that will arise from the Plan having been examined in the context of a number of factors that could potentially affect the integrity of the European Sites. The EPO for biodiversity, flora and fauna has been developed with reference to the associated AA and in consultation with the AA ecologist.

5.2 Environmental Protection Objectives

There are essentially two types of objectives considered as part of this SEA. The first of the objectives relates to the wider environmental objectives, i.e., EPOs at an international, European and national level, contained in existing legislation, plans and policies, and the second relates to the EPOs, which were devised to test the effects of the Plan on the wider environment. The objectives have been adapted to the local circumstances and environmental issues of Dublin City.

In addition, the selection of the environmental objectives had regard to the indicative list of environmental protection objectives outlined in the document, Implementation of the SEA Directive 2001/42/EC (DEHLG, 2004).

Table 5.1 details the EPOs set for the protection of each of the environmental receptors and **Table 5.2** outlines detailed assessment criteria which represent the issues that will be considered during the assessment of whether the Development Plan will contribute to meeting the EPOs.

Table 5.1: Environmental Protection Objectives

Environmental Receptor	Environmental Protection Objective
Population and Human Health (PHH1)	To create a sustainable compact city and a high quality safe environment in which to live, work and/or visit.
Biodiversity/ Flora and Fauna (BFF1)	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features.
Climatic Factors (CF1)	Contribute to the mitigation of/and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.
Air Quality (AQ1)	Minimise emission of pollutants to air associated with development activities and maintain acoustic quality.
Water (W1)	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation including the River Basin Management Plan of the Eastern River Basin District.
Material Assets (MA1)	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population
Cultural Heritage (CH1)	To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage.
Landscape and Soils (L1)	To protect and where appropriate enhance the character, diversity and special qualities of Dublin city's landscapes and soils.

Table 5.2: Detailed Assessment Criteria

Environmental Protection Objective	Detailed Assessment Criteria – To what extent will the Dublin City Development Plan:	SEA Topic
Objective 1 To create a sustainable compact city and a high quality safe environment in which to live, work and/or visit.	<ul style="list-style-type: none"> • Improve co-ordination of land use and transportation? • Preserve amenity/recreational areas? • Improve water quality/quantity? • Protect water areas, including freshwater and coastal? • Contribute to Flood Risk Management Planning? • Increase modal shift to public transport? • Reduce population exposure to high levels of noise and air pollution? 	Population and Human Health (PHH1)

Table 5.2 (ctd): Detailed Assessment Criteria

Environmental Protection Objective	Detailed Assessment Criteria – To what extent will the Dublin City Development Plan:	SEA Topic
<p>Objective 2 To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features.</p>	<ul style="list-style-type: none"> • Provide effective protection of European and nationally designated biodiversity sites and species (including species of flora and fauna within and outside designated sites)? • Sustain, enhance or where relevant prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of biodiversity? • Avoid loss of protected habitats, species or their sustaining resources in national and European designated ecological sites? • Support delivery of Habitats and Birds Directives? • Contribute to Ireland’s National Biodiversity Action Plan objectives and actions? 	Biodiversity/ flora and fauna (BFF1)
<p>Objective 3 Contribute to the mitigation of/and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.</p>	<ul style="list-style-type: none"> • Minimise emissions of greenhouse gases? • Reduce waste of energy, and maximise use of renewable energy sources? • Ensure flood protection and management? • Reduce vulnerability to the effects of climate change? • Restrict where applicable development in flood plains and valuable green space? 	Climatic Factors (CF1)
<p>Objective 4 Minimise emissions of pollutants to air associated with development activities and maintain acoustic quality.</p>	<ul style="list-style-type: none"> • Prevent air pollution associated with development activities? • Control nuisance associated with odour and/or dust emissions from development activities? 	Air Quality (AQ1)
<p>Objective 5 To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation including the river Basin. Management Plan of the Eastern River Basin District.</p>	<ul style="list-style-type: none"> • Promote sustainable drainage practices to improve water quality and flow and to enhance opportunities for biodiversity? • Improve water body status to at least good status, as appropriate to the WFD? • Prevent deterioration of the status of designated water bodies with regard to quality, quantity? • Prevent physical modifications that would impact habitats and fish passage? • Contribute to effective protection and enhancement of ‘protected areas’ on the WFD Register of Protected Areas? • Promote sustainable use of water and water conservation? • Reduce the impacts from point and diffuse source pollutions, abstraction and flow regulation? 	Water (W1)

Table 5.2 (ctd): Detailed Assessment Criteria

Environmental Protection Objective	Detailed Assessment Criteria – To what extent will the Dublin City Development Plan:	SEA Topic
<p>Objective 6 To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population.</p>	<ul style="list-style-type: none"> • Improve efficiencies of transport, energy and communication infrastructure? • Decrease quantity of city vacant lands? • Reduce the generation of waste and adopt a sustainable approach to waste management in compliance with the Eastern Midland Waste Plan? • Encourage the development of renewable energy sources? • Development to have access to sufficient wastewater treatment infrastructure as provided by Irish Water? • Provide drinking water supply and water conservation measures? • Increase employment opportunities? 	Material Assets (MA1)
<p>Objective 7 To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage.</p>	<ul style="list-style-type: none"> • Improve protection for protected archaeological sites and monuments and their settings? • Improve protection for protected structures and conservation areas? • Improve protection for areas of archaeological potential and for undiscovered archaeology? • Enhance access to sites of heritage interest? 	Cultural Heritage (CH1)
<p>Objective 8 To protect and where appropriate enhance the character, diversity and special qualities of Dublin city's landscapes and soils.</p>	<ul style="list-style-type: none"> • Re-use of brownfield lands, rather than developing greenfield lands? • Protect and where appropriate enhance designated areas of high quality landscape? • Improve protection for landscapes and seascapes of recognised quality? • Ensure that landscape character is considered in the development process? • Enhance provision of, and access to, green space (green infrastructure)? 	Landscape and Soils (L1)

5.3 Targets and Indicators

In line with the EPOs are associated targets and indicators that are included in. Targets set aims and thresholds which should be taken into consideration to effectively assess the impact of the Plan on the environment. Along with the targets, indicators have also been devised. Indicators are those measures used to track the achievements of the EPOs towards the particular targets set and to monitor the impact of the Plan on the environment.

Table 5.3: Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Population and Human Health	To create a sustainable compact city and a high quality healthy safe environment in which to live, work and/or visit.	Sustainable densities achieved in new residential/mixed use schemes	Average density of new residential development	Every 2 years	Planning and Property Development Department (PPDD)
		Increase the number of residential properties	Percentage increase of residential properties	Every 2 years	(PPDD)
		Improved access to community and recreational facilities	Percentage increase in the number of schools/crèches/community parks/sports facilities and primary health centres	Every 2 years	(PPDD)
Biodiversity, Flora and Fauna	To protect and where appropriate enhance the diversity of habitats, species, ecosystems and geological features.	Maintain the favourable conservation status of all habitats and species which are within designated sites protected under national and international legislation and also habitats and species outside of designated sites.	Number of developments granted planning permission within designated sites.	Every 2 years	(PPDD) Parks and Landscape Services
			Number of Natura Impact Statements submitted to Dublin City Council	Every 2 years	Parks and Landscape Services
			Percentage increase or decrease of bat and otter populations in Dublin city	Every 2 years	Parks and Landscape Services
		Deliver the objectives of the Dublin City Biodiversity Action Plan 2015–2020	Number of objectives/policy actions delivered by the biodiversity plan	Every 2 years	Parks and Landscape Services

Table 5.3 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		Implementation of the actions from the green infrastructure strategy for Dublin city	Number of projects delivered by the green infrastructure strategy	Every 2 years	(PPDD) Parks and Landscape Services
			Totals of, or reduction in the quantum of greenfield lands; length of linked green corridors		(PPDD) Parks and Landscape Services
		Control and protect against the spread of noxious weeds and invasive species	Number of projects within the city that have identified noxious weeds and invasive species	Every 2 years	(PPDD) Parks and Landscape Services
		Achieve the objectives of the Tree Strategy and Canopy Survey for Dublin city	Percentage increase of tree planting within Dublin city	Every 2 years	(PPDD) Parks and Landscape Services
			Tree canopy cover within the city area to contribute to carbon sequestration (no. of trees)	Every 2 years	Parks and Landscape Services
		Implementation of setback/ buffer zones of 10m for development along watercourses	Number of planning applications adhering to the 10m buffer zone setback	Every 2 years	(PPDD)
		Increased provision for soft landscaping in existing and new developments	Amount of open space provided in planning applications for Z10 and Z15 lands	Every 2 years	(PPDD)

Table 5.3 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Climatic Factors Air Quality	Contribute to the mitigation of/ and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.	Maintain air quality status and meet value targets for named pollutants in line with Air Quality Framework Directives	Values of monitored pollutants in the air, including the levels of Nitrogen Oxides (NO _x) and Particulate matter (PM ₁₀) not breach regulation limits	Every 2 years	Roads and Traffic – Noise and Air Section
	Minimise emissions of pollutants to air associated with development activities and maintain acoustic quality.	Decrease greenhouse gas emissions in line with national targets	Average energy consumption of new residential housing stock, tonnes of CO ₂ /year	Every 2 years	Energy Division
		Increase energy efficiency (reduce energy waste) from renewable energy sources in line with the National Energy Efficiency Action Plan	Number of objectives implemented from Dublin City Energy Strategy	Every 2 years	Energy Division
			Number of permitted developments that include district heating	Every 2 years	Energy Division
			Number of permitted developments incorporating solar renewables	Every 2 years	Energy Division
			Number of (social) housing units, public buildings and community centres connected to district and group heating systems	Every 2 years	Energy Division
		Produce noise maps for Dublin city and ensure they are updated	Number of zonings that conflict in relation to acoustic increases	Every 2 years	Roads and Traffic – Noise and Air Section

Table 5.3 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		Increase modal shift to public transport, walking and cycling	Percentage/ quantum of population travelling to work by public transport, walking and/ or cycling.	Every 2 years	Roads and Traffic
		Compliance with the requirements of the Development Plan's Strategic Flood Risk Assessment	Percentage of planning applications compliant with the SFRA	Every 2 years	(PPDD) Environment and Engineering – Water Division
		Compliance with the OPW's Guidelines for Planning Authorities – The Planning System and Flood Risk Management	Percentage of planning applications incorporating flood risk assessment and conditions requiring appropriate flood resilient measures for new developments	Every 2 years	(PPDD) Environment and Engineering – Water Division
		Implement Sustainable Urban Drainage Systems in all new developments	Number of Sustainable Urban Drainage Systems implemented in new planning applications	Every 2 years	(PPDD) Environment and Engineering – Water Division

Table 5.3 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Water	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation, including the River Basin Management Plan of the Eastern River Basin District.	Achieve and maintain good status of all surface water bodies.	Improvement in Status of Water Body as per RBMP	Every 2 years	Environment and Engineering – Water Division
		All designated bathing waters to comply with the requirements of the Bathing Water Quality Regulations 2008 (S.I. 79 of 2008)	Bathing waters comply with requirements of Bathing Water Regulations	Every 2 years	Environment and Engineering – Water Division
		Identify and provide Surface Water pipelines as appropriate	Lengths of new Surface Water pipeline installed	Every 2 years	Environment and Engineering – Water Division
Material Assets	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population	Develop public transport, cycleways and road infrastructure to facilitate sustainable growth and travel patterns	Percentage change in commuting modal shift to sustainable travel modes	Every 2 years	Environment and Transportation
		Extend and improve the cycling and walking network	Number of new cycling and walking schemes implemented	Every 2 years	Environment and Transportation
		Comply with the Eastern Midlands Waste Management Plan and operate sustainable waste management practices	Quantum of residential and commercial waste reused and recycled	Every 2 years	Engineering – Waste Management
		Protect and enhance green infrastructure	Number of greenfield sites developed	Every 2 years	(PPDD) Parks and Landscape Services

Table 5.3 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Cultural Heritage	To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage	No loss or adverse impact on the fabric or setting of monuments on the Record of Monuments	Number of planning applications with archaeological conditions that were complied with	Every 2 years	(PPDD)
		No loss of or adverse impact on the architectural heritage value or setting of protected structures and monuments	Loss of, or adverse impact on protected structures, architectural conservation areas or NIAH structures	Every 2 years	(PPDD) City Architects – Conservation
			Number of archaeological sites with archaeological conditions attached	Every 2 years	(PPDD) City Architects – Conservation
		No loss of or adverse impact on structures recorded on the National Inventory of Architectural Heritage	Number of protected structures put at risk or on the derelict sites register	Every 2 years	(PPDD) City Architects – Conservation
		Revision of the Dublin Heritage Plan 2002–2006, to ensure enhancement of key sites	Number of conservation plans implemented through the Dublin Heritage Plan	Every 2 years	(PPDD) City Architects – Conservation City Archaeologist
			Number of proposed plans and schemes screened/ assessed by the Conservation Officer for the City and City Archaeologist	Every 2 years	(PPDD) City Architects – Conservation City Archaeologist
			Number of Architectural Conservation Areas designated	Every 2 years	(PPDD) City Architects – Conservation

Table 5.3 (ctd): Objectives, Targets and Indicators

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Landscape and Soils	To protect and where appropriate enhance the character, diversity and special qualities of Dublin city’s landscapes and soils and geological features	Develop new areas of open space and increase number of trees	Number of new parks/ open spaces, change in area of the parks and number of trees planted	Every 2 years	(PPDD) Parks and Landscape Services
		Create a well-connected city landscape consisting of linear connections (e.g. river corridors and networks)	Length of existing and new linked landscape corridors	Every 2 years	(PPDD) Parks and Landscape Services
		Develop brownfield lands and vacant sites	Total area of brownfield lands and vacant sites developed	Every 2 years	(PPDD) Parks and Landscape Services

06

Identification and Evaluation of Development Plan Alternatives

6.1 Introduction

Article 5 of the SEA Directive requires the environmental report to consider ‘reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme’ and the significant effects of the alternatives selected. Alternatives must be realistic and capable of implementation and should present a range of different approaches within the statutory and operational requirements.

The following section seeks to document the process of the development of the alternatives relating to the SEA of the new Development Plan for the city by identifying where key decisions are reached, and by considering the environmental impacts of the policy path chosen. The examination of alternative means of achieving the strategic objectives of a plan, in the first place recognises the broad challenges before policy makers, as well as seeking the articulation of why the plan prescribes one path over another.

The consideration of the Plan alternatives is a real-world exercise that recognises that the plan must work within an existing context of National and Regional Strategic Plans, climate change, and an Irish and European legislative framework that has sustainable development at its core. It is not an ‘open-book’ exercise, where every conceivable option/alternative is examined. Therefore, in selecting realistic alternatives that could be evaluated, ‘no development’ was considered an unreasonable alternative, as it is unlikely to be delivered and would not reflect the statutory and operational requirements of the Plan.

The development of the alternatives for the new city Plan included a workshop

between the SEA team and the Development Plan team of Dublin City Council where the main strategic issues facing the city and potential development options/scenarios were discussed. A follow up meeting was also held.

This following section of this Environmental Report sets out:

- The legislative context for the consideration of alternatives;
- An overview of the strategic issues presented for alternatives;
- An outline of the reasons for selecting the alternatives dealt with;
- A description of the alternatives; and
- Evaluation of the alternatives from a planning perspective.

Chapter 07 of this Environmental Report provides an environmental evaluation of the alternatives.

6.2 Legislative Context

The consideration of alternatives is a requirement of the SEA Directive (2001/42/EC). It states under Article 5(1) that;

Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.

Annex 1 (h) of the Directive clarifies that the information to be provided on alternatives under Article 5(1), is *inter alia* an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.

Article 9 of the Directive requires that a statement shall be prepared providing information on the reasons for choosing the plan as adopted, in the light of the other reasonable alternatives dealt with.

Annex 1 (f) details the environmental topics to be considered in the evaluation of the alternatives, which is the same as that addressed in the assessment of the plan itself:

...biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

Therefore, the Directive emphasises that the SEA process must consider alternatives that are ‘reasonable’, and take into account ‘the objectives’ of the plan, and ‘the geographical scope of the plan’.

The term ‘reasonable’ is not defined in the legislation. Good practice points to the analysis of ‘alternatives’ as being a constructive and informative exercise for the policy makers, and that only ‘possible’ options for policy are examined. Plan scenarios that run counter to European environmental directives, the National Spatial Strategy (NSS), Ministerial Guidelines or Regional Planning Guidelines (RPG) would not be considered reasonable.

Alternatives are required to take into account the objectives of the plan. The alternatives study, therefore, must operate within the strategic objectives, set out for the plan, and provide an examination of alternative means of implementing the plan.

Section 3.14 of the SEA DECLG Guidelines notes that the higher the level of the plan, the more strategic the options which are likely to be available such as that for a Development Plan. Conversely, lower tier plans, such as LAPs, will be framed in a policy context set by the level(s) above them, and strategic options may be limited.

The Directive does not prescribe at what stage consideration of alternatives should be undertaken, as it requires a rationale for choosing the development plan as adopted, in the light of the other reasonable alternatives dealt with. However, to present a useful input into the plan making process, all guidance points to alternatives assessing the implementation of the plan at a strategic level, at the stage where the preferred strategy is being finalised. This is not to say that location specific policies should not be examined. But this must be placed within the context of the SEA’s role to examine the strategic environmental implications of the direction of the plan at the appropriate policy level.

6.3 Rationale for Selecting Alternatives

6.3.1 Background

The consideration of reasonable alternatives must take into account ‘the geographical scope of the plan’. The Dublin City Development Plan area represents the core of the city region of Dublin. As the city’s land area is relatively compact, the availability or access to essential infrastructure within competing geographical districts or neighbourhoods is not a major concern. The key issue for the city is not a simple question of whether to locate development at particular locations, but how to facilitate targeted growth within the city, increasing efficiencies within the limited land resources; by better integrating land-use and transportation; and redeveloping under-utilised brownfield lands (including vacant land, particularly within the canal areas), etc., having regard to the core issues of climate change and proper planning and sustainable development.

6.3.2 Parameters for Proposed Alternatives

The parameters for the proposed alternatives have regard to the policies set out in the National Spatial Strategy and the Regional Planning Guidelines (RPGs) which recognise Dublin city’s key role in the economic and social development of the state. It is noted that the Regional Planning Guidelines will be replaced by Regional Spatial and Economic Strategies (RSES) during the period of the new Plan. The new RSES will update population targets and will take into account the shortfall in targets in the region having regard to the sustained economic downturn during the period

2008–2013 (6 years) which straddled two city Plan periods.

The Dublin City Development Plan 2016–2022 will set out a vision and overall strategy for the proper planning and sustainable development of the city for a six-year period. It will also set out guiding policies and objectives for the development of the city in terms of its physical growth, economic, social and cultural activities and environmental protection and enhancement.

Chapter 04 of the Dublin City Development Plan 2011–2017 provides a robust overview of ‘Shaping the City,’ which will remain largely intact for the next Development Plan. The chapter sets out the strategic approach for the urban form and structure of the city which is based on a number of key approaches, which include: the creation of a more compact city thereby reducing urban sprawl; development of a well-designed and defined network of streets and quality of urban spaces; the development of a green infrastructures strategy; creation of a sustainable neighbourhoods close to public transport; and the integration of a cultural and social vision into place-making.

The core strategy of the Dublin City Development Plan 2011–2017 seeks to create a compact, quality, green, well-connected city with a mix of uses that generates real long-term economic recovery with sustainable neighbourhoods and socially inclusive communities. It establishes a spatial hierarchy for the city, which prioritises the inner city, key developing areas, key district centres, and strategic development and regeneration areas. The strategy seeks to: expand the city centre towards the Docklands, Heuston and

Grangegorman; develop sustainable urban villages such as Rathmines and Crumlin; and make new developing/regeneration areas such as the North Fringe and Docklands.

6.3.3 Key Strategic Influences

■ Regional Planning Guidelines (RPGs)/Regional Spatial Economic Strategies (RSES)

The regional targets are to be reviewed shortly and may be reduced on the basis of the most recent population projections from the Central Statistics Office in 2013, which take account of the 2011 census data. DCC estimates that some 4,217 units could be required per annum over the lifetime of the Plan.

The settlement strategy for the metropolitan area includes a strong emphasis on the need to gain maximum benefit from existing assets, such as public transport and social infrastructure. Dublin city in its entirety lies within the metropolitan area and the RPGs give direction to Dublin city as the gateway core for high intensity clusters, Brownfield development urban renewal and regeneration. The development plan incorporates this into the core strategy/settlement hierarchy which priorities the inner city, key developing areas, key district centres and strategic development/regeneration areas.

Given Dublin city's pre-eminence at the core of the Dublin region the new RSES will continue to support the consolidation of the city area and its economic development.

■ Core Strategy

The existing Plan identifies a number of strategic development and regeneration

areas, which are important brownfield sites with the potential to deliver a significant quantum of mixed-uses and create synergies to regenerate their respective areas.

The Key District Centres (KDCs) represent the top tier of urban centres outside the city centre. The nine KDCs (formerly Prime Urban Centres) act as a strong spatial hub providing a range of commercial and community services etc. These are remaining as per the existing Plan.

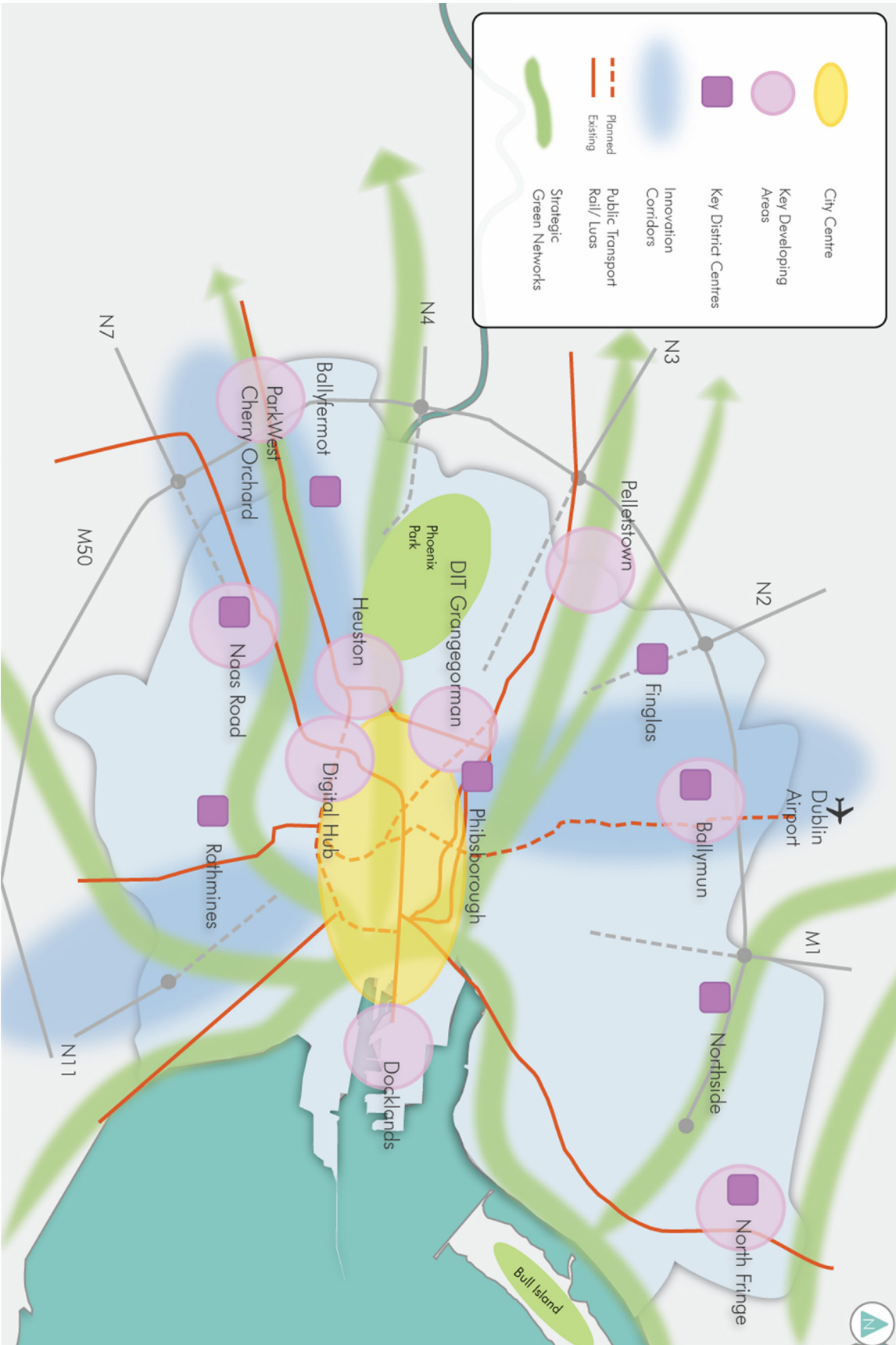
■ Other Influences

The DCC 2012 housing land availability survey estimated that there were 440 hectares of zoned land in Dublin city suitable for residential and mixed use development. It is vital to optimise this potential, particularly as the city has a finite supply of land.

Vacant buildings and underutilised sites have been the subject of project work and will be a focus of attention and further policy development. The continued regeneration of economically underperforming areas, including the redevelopment of vacant sites is an important consideration for the new City Plan. The 'Living City Initiative' will be encouraged by DCC and is a scheme of property tax incentives which applies in certain 'special regeneration areas' provides for tax relief for qualifying expenditure incurred on both residential and certain commercial refurbishment and conversion work that is carried out during the qualifying period.

The city's green infrastructure network plays a key role in creating and sustaining places, making the city an attractive place

Figure 6.1 – Core Strategy 2011-2017 Dublin City Plan



Source: Figure 2 Dublin City Council Development Plan 2011-2017

to live, benefiting health and wellbeing and making sure that the essential components of environmental sustainability are safeguarded.

The transportation policies and objectives for the new Plan will be guided by the objectives of the National Transport Authority's (NTAs) draft Transport Strategy 2011–2030 and the related 2013–2018 Integrated Implementation Plan. Provision of an efficient and integrated public transport system promotes sustainable development, helps improve the urban environment, and helps sustain economic progress and competitiveness.

The alternatives proposed are intended to explore the options to accommodate future growth into the medium-term and be flexible in respect of population projections for Dublin city over the medium-term.

6.4 Alternatives Considered for SEA

For the purposes of Dublin City Council's development plan review, three possible realistic alternatives have been identified based on the overall strategy of gaining maximum benefit from existing assets, such as public transport social and green infrastructure. Other potential alternatives were considered which included a targeted review of residual Z9 lands (Amenity/Open Space Lands/Green Network) for potential residential use but was discounted from the outset as it was considered that these lands play an important role serving the city's recreational needs.

The possibility of rezoning some Z6 (Employment/Enterprise) lands for residential use close to public transport links and SDRAs, was also examined but was considered to be a longer term option (i.e., outside the scope of this Plan period) – mindful of the objective to maintain a strong employment base within the city. The current Plan outlines that the Z6 (Employment/Enterprise) zoned lands constitute an important land bank for employment use in the city, which it is considered strategically important to protect.

It is preferable that potential alterations to land use zoning objectives are predicated on a proximity principle to public transport and existing social infrastructure (schools, retail, etc.). In addition to this, the strategy considered should be to appraise sites from a sequential perspective from areas identified in the core strategy that already have key social infrastructure in place. The development of such areas will ultimately underpin and make the best use of the substantial investment in social infrastructure throughout the city.

The following alternatives would all form part of the overall development strategy for the city Plan. The emphasis is to accommodate potential future residential/commercial development at appropriate locations proximate to existing public transport corridors and to key development areas (and existing social/green infrastructure). The consideration of alternatives will also seek to protect strategic economic lands and the green infrastructure as well as cultural heritage assets. The proposed alternatives are described in detail below.

6.4.1 Alternative 1 – Targeted Growth around existing identified growth centres

6.4.1.1 Description of Alternative

This alternative seeks to target and consolidate growth around the Z5 city-centre mixed use zoning area as well as existing identified growth centres such as the Key District Centres (KDCs), the Strategic Development and Regeneration Areas (SDRAs), the Strategic Development Zones (SDZ) and areas identified in Local Area Plans (LAPs). The Council would favour the development of vacant lands within the canal area of the city and to incentivise owners to redevelop these lands (such as through the ‘New City Living Initiative’).

This alternative examines changing the wording of Z10 (Inner Suburban Sustainable Mixed-Use) land use areas to allow for residential as the prominent use outside the canals and more mixed use within the canals.

The Z10 zoning will read as follows:

To consolidate and facilitate the development of inner city and inner suburban sites for mixed-uses – with residential the predominant use in inner suburban locations and office, retail and residential the predominant uses in inner city areas.

6.4.1.2 Planning Considerations

This alternative approach is to develop the city in a planned and sustainable manner in order to ensure a balance between development and conservation/ environmental protection. The approach

takes a long-term vision to manage and plan for growth, in order to achieve long-term sustainability. This approach seeks to promote balanced and sustainable economic, social and cultural development to enable the city to fulfil its role as the key driver of economic growth for the state.

The existing Plan’s Core Strategy remains robust and the intention is to strengthen and consolidate the robust city centre mixed use zoning areas (Z5) with active promotion of the inner city as an attractive place for urban living, the delivery of housing regeneration projects, (to also include to incentivise the use of vacant sites that have been identified which account for 61.4 ha of land in the inner city). The Plan identifies a number of strategic development and regeneration areas in addition to the inner city which represent significant areas of the inner and outer city with substantial development capacity and the potential to deliver the residential, employment and recreational needs of the city.

Key Development Areas or SDRAs for growth and infrastructure development and enhancement would continue be identified and promoted. Higher density development would be focused into suitable strategic locations in the city such as SDZs. Areas for development/redevelopment would be identified to accommodate new urban development (such as vacant lands) and deliver the maximum quantitative efficiency of new population density and floorspace.

Economic and population growth in targeted strategic locations, such as key development areas would be likely to safeguard the amenities and character

of established residential areas and at the same time to facilitate the essential growth of the city in line with regional plans and forecasts.

Targeted growth at strategic locations throughout the city would benefit socially and economically deprived areas of the inner city where the need of access to services and employment is greatest, resulting in environmental improvements to these areas.

6.4.2 Alternative 2 – Market-led Growth

6.4.2.1 Description of Alternative

The approach of 'Alternative 2' is to promote the development of the city in a market-led manner, which would involve a dispersed model of spatial perspective throughout the city. The location, nature and density of new development in the city would be influenced primarily by market demand and driven by economic market forces. Higher intensity development would not necessarily take place within designated growth centres (SDRAs/KDCs) in close proximity to transportation nodes.

Sites of high-density development have the potential to be dispersed throughout the city irrespective of the prevailing architectural and residential character or environmental amenity of the surrounding area.

6.4.2.2 Planning Considerations

A 'market-led' approach would over time achieve consolidation, albeit in an ad hoc manner, and not necessarily in locations close to public transport or services. All areas of the city would be potentially available for increases in density, including the suburbs, outer city, open spaces, environmentally more vulnerable areas, etc.

A more flexible, market-driven approach to developing the city would prevail with the majority of the city area available for higher-intensity development.

For the purposes of evaluation, the 'market-led' approach assumes that the areas proposed for development would occur on lands more distant from key services and in potential conflict with conservation areas.

Facilitating higher densities on all 'infill' and 'Brownfield' sites, throughout the city, would likely result in a dispersed pattern of settlement with sporadic pockets of high-density development. The absence of a coherent spatial strategy for high-density development would inhibit the development of an integrated high quality viable public transport system.

Speculative development pressure would most likely increase on inappropriate sites, including conservation areas, recreational and sporting facilities. The established character of the city, including built and natural heritage assets has the potential to be undermined with detrimental results.

Sites of high-density development would be dispersed throughout the city irrespective of the prevailing architectural and residential character or environmental amenity of the surrounding area. This could result in adverse consequences such as physical and social infrastructural pressure, loss of environmental quality, natural/built heritage and architectural character and accelerated economic obsolescence. This approach would erode the character and quality of residential neighbourhood areas in the city.

6.4.3 **Alternative 3 – Selected Concentration of growth targeted on existing SDRAs/ KDC/SDZ areas – Elements of a phased approach to the development of land.**

6.4.3.1 **Description of Alternative**

The third main alternative being considered by the Council is to allow for a selected concentration of growth targeted on existing areas within the SDRAs/KDCs/SDZ areas with a phased approach to delivery of development, such as between the Docklands SDZ and other areas outside the canal area.

6.4.3.2 **Planning Considerations**

The NSS places particular emphasis on the physical consolidation of the metropolitan area, which incorporates the entire functional area of Dublin City Council. This necessitates the sustainable development of all vacant and under-used lands with a focus on areas close to public transport corridors as well as areas of under-utilised physical and social infrastructure. The phasing of the development of lands within the administrative area of Dublin City Council is not favoured as the lands within Dublin are considered to be the ‘core area’ of the city region. As such it is not appropriate to impose phasing on the development of lands within Dublin city which are the key driver of economic growth within the state.

Any potential constraints in the KDCs could be resolved within the lifetime of the new Plan and, therefore, it is not considered appropriate to artificially constrain development through the phasing of lands which may come on stream for

development where identified constraints have been resolved.

It is also important that the Z5 city centre lands are not given a lower preference in respect of development as they represent the core area of the city region.

All of the lands within Dublin city could be considered to be in a first phase of any development as all the land is considered to be of equal importance to the city in terms of creating sustainable communities, etc.

Uncertainty in respect of phasing would lead to confusing signals to the market and the ability to deliver development at appropriate locations.

The settlement hierarchy and land use zoning approach reflects the over-arching objective to achieve sustainable development with mixed use neighbourhoods throughout the city in close proximity to employment, local services and high quality public transport in accordance with national and regional guidance.

6.4.4 **‘Do-Nothing’ Scenario**

The ‘do-nothing’ scenario is not considered to be a reasonable alternative as the review of the existing, and the making of a new, development plan is required under planning legislation, which is to be undertaken every six years.

07

Identification and Evaluation of Alternatives

Chapter 07 – Identification and Evaluation of Alternatives

7.1 Introduction

It has been previously outlined in **Chapter 06**, that Article 5 of the SEA Directive requires the Environmental Report to describe and evaluate ‘the likely significant effects on the environment of implementing the plan or programmes, and reasonable alternatives’. This chapter provides such assessment of the three alternatives identified and omits the ‘do-nothing’ alternative as not being a ‘reasonable’ alternative.

7.2 Testing the Development Plan Alternatives

The three alternatives previously outlined have been assessed against the set of Environmental Protection Objectives, as shown in .

Table 7.1: Strategic Environmental Protection Objectives

Environmental Receptor	Environmental Protection Objectives (EPOs)
Population and Human Health (PH1)	To create a sustainable compact city and a high quality safe environment in which to live, work and/or visit.
Biodiversity/Flora and Fauna (BFF1)	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features.
Climatic Factors and Air Quality (CF1)	Contribute to the mitigation of/and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.
Climatic Factors and Air Quality (AQ1)	Minimise emissions of pollutants to air associated with development activities and maintain acoustic quality.
Water (W1)	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation, including the River Basin Management Plan of the Eastern River Basin District.
Material Assets (MA1)	To make best use of Dublin city’s infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city’s population
Cultural Heritage (CH1)	To protect and where appropriate enhance the character, diversity and qualities of Dublin city’s cultural, including architectural and archaeological, heritage
Landscape and Soils (L1)	To protect and where appropriate enhance the character, diversity and special qualities of Dublin city’s landscapes and soils

7.3 Alternative Assessment approach

The approach used for assessing the alternatives to the Plan is an objective led approach using assessment matrices, in line with current best practise for SEA. The assessment matrix tests whether the alternatives will have likely significant impacts (positive and negative, direct and indirect, cumulative and synergistic) for the defined Strategic Environmental Protection Objectives as outlined in.

The assessment matrices contain a comparison of each of the alternatives against each of the Strategic Environmental Protection Objectives with an assessment rating assigned for the purposes of comparison. As outlined in , a plus (+) indicates a potential positive impact, minus (-) indicates a potential negative impact, a (?) outlines that in the absence of further detail the impact is unclear, and a neutral or no impact is indicated by a zero (0). Combinations of these symbols are also possible, e.g., (+/-) indicates that both positive and negative impacts are likely or (0/-), which indicates that impact may be neutral or negative depending on how the policy or objective within the scenario is delivered. It should be noted that where impacts are increased, this increased level of impact has been recorded with double symbols, e.g. ++ or --.

Table 7.2: Evaluation Criteria

Will the Implementation of the Alternative Serve to Have:	
A significant beneficial impact on the environmental receptor	+
A significant adverse impact on the environmental receptor	-
An uncertain impact on the environmental receptor	?
An insignificant impact or no relationship with the environmental receptor	0

7.4 Overview of Plan Alternatives

As previously outlined in **Chapter 06**, the three proposed City Plan Alternatives are:

- Alternative 1 – Targeted growth around existing identified growth centres;
- Alternative 2 – Market-led growth; and
- Alternative 3 – Selected concentration of growth targeted on existing SDRA/KDC/ SDZ areas – Elements of a phased approach to the development of land.

In order to assist with the evaluation process the SEA baseline information and, in particular, the sensitivity mapping, were utilised in order to assess the potential impacts of each individual alternative scenario.

For Alternative 1 the land use zonings of Z5 (city centre) and Z10 (inner suburban) were incorporated into the Core Strategy mapping which outlines the Key Development Areas (SDRAs) and Key District Centres (KDCs).

Figure 7.1: Environmental Sensitivity Mapping and Alternatives

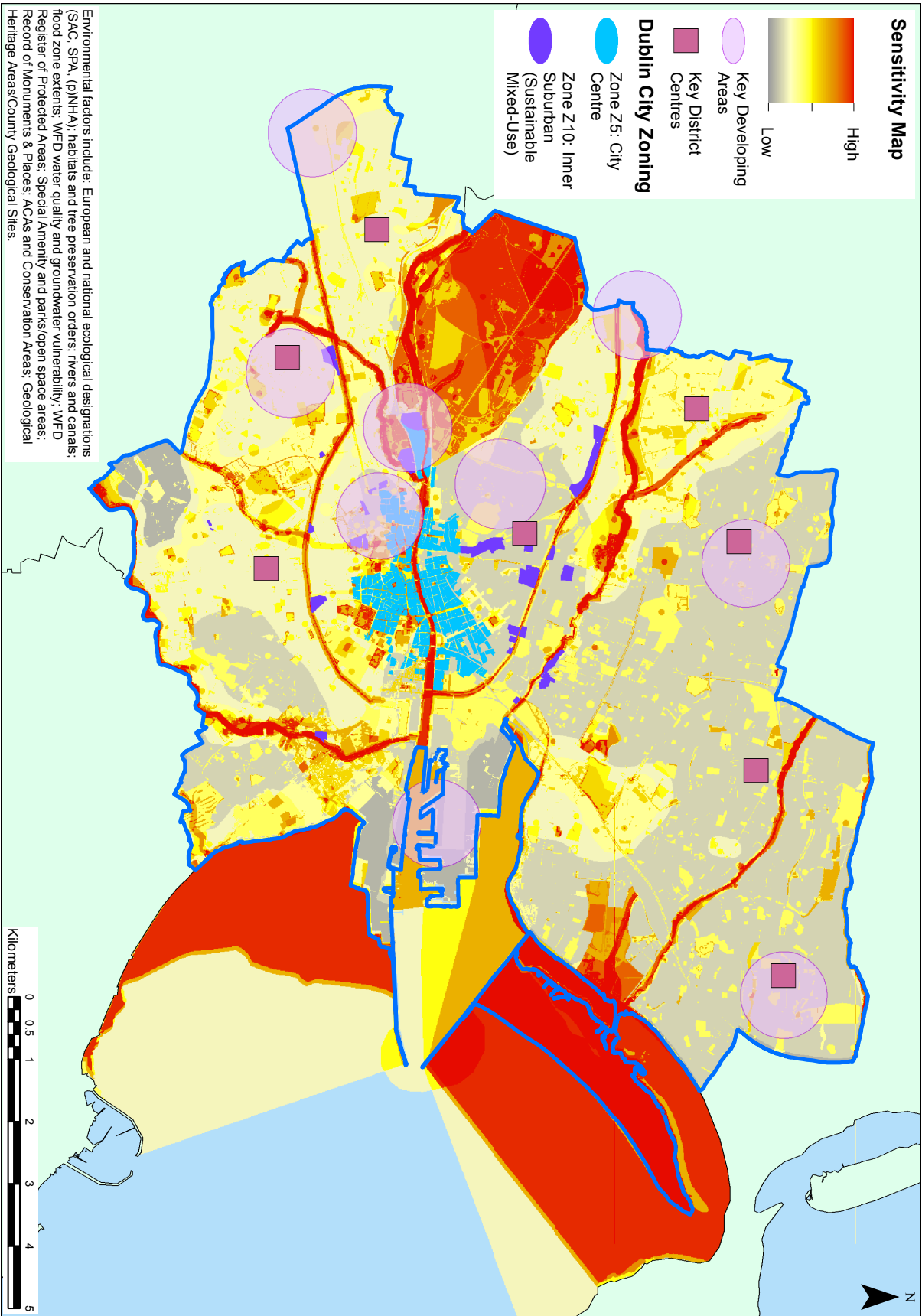
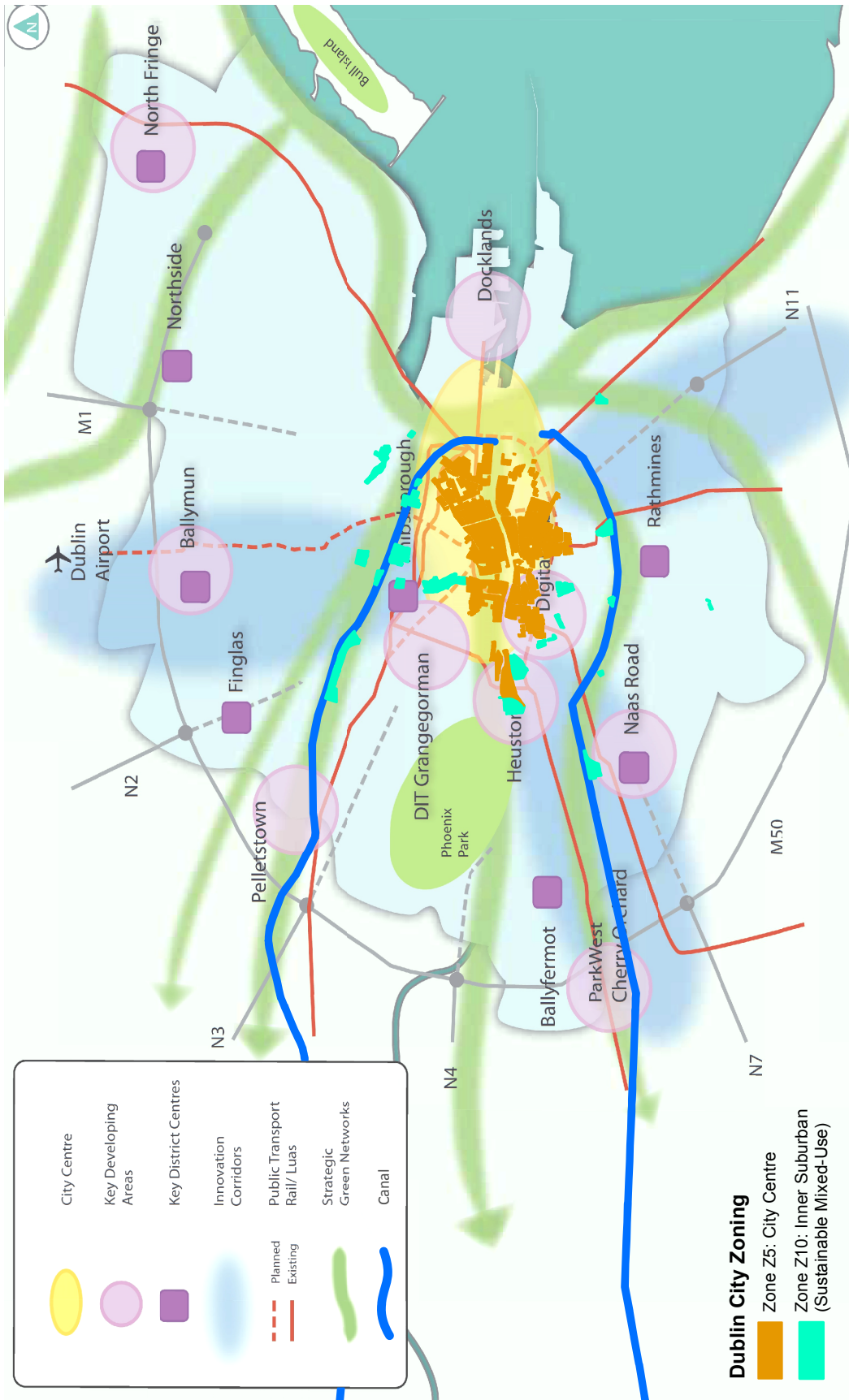


Figure 7.2 : Visual Representation of Alternative 1



7.5 Evaluation of Development Plan Alternatives

Provides a summary overview of the assessment of each of the three alternatives against the Environmental Protection Objective while to provides a discussion of the assessment.

Table 7.3: Assessment of the Development Plan Alternatives

Environmental Protection Objectives (EPOs)	Alternative 1 – Targets growth around existing identified growth centres		Alternative 2 – Market-led growth		Alternative 3 – Selected concentration of growth targeted on existing SDRA/ KDC/ SDZ areas – elements of a phased approach to the development of land	
PH1	++		-		+	-
BFF1	+	-	-		+	-
CF1	+	0	+	-	+	0
AQ1	+		?	-	+	-
W1	+	-	-		+	-
MA1	+		-		+	-
CH1	+	-	-	?	-	?
L1	+	0	-		+	0

Very Positive	Positive	Insignificant/ No impact	Negative	Very Negative	Uncertain
++	+	0	-	--	?

Table 7.4: Alternative 1 – Targets Growth Around Existing Identified Growth Centres

EPOs	Discussion on Alternative 1
<p>PH1</p>	<p>This alternative will contribute significantly to the future growth of the city and assist with alleviating urban sprawl by defining where the growth will be situated in accordance with the core strategy. By outlining that growth will be focused on the Z5 city centre zoning along with the identified growth centres progress will be made towards consolidation of the city in an appropriate manner.</p> <p>The approach takes a long-term vision to manage and plan for growth, in order to achieve long-term sustainability. This approach seeks to promote balanced and sustainable economic, social and cultural development to enable the city to fulfil its role as the key driver of economic growth for the state.</p> <p>This consolidation will be assisted by the alteration to the existing Z10 zoning which previously outlined that it would seek; ‘to consolidate and facilitate the development of inner suburban sites for mixed use development of which office, retail and residential would be the predominant uses’ and now will seek; ‘to consolidate and facilitate the development of inner city and inner suburban sites for mixed-uses –with residential the predominant use in inner suburban locations and office, retail and residential the predominant uses in inner city areas.’ The change of wording to this zoning will facilitate the mixed use growth of the inner city area located within the boundaries of the canals having a net positive impact on population and leading to a more sustainable compact city.</p> <p>The scenario will allow for a range of development types and mixes to be located in the growth centres providing suitability for a range of dwelling types for individuals and families. In addition, there will be incentives to redevelop the vacant lands (61.4 hectares in the inner city) through initiatives such as ‘New City Living’, which provides tax incentives to carry out refurbishment works on period houses. This will in turn reduce the transient nature of the population and lead to a city that contains both an employment and resident base.</p> <p>Targeted growth at strategic locations throughout the city would benefit socially and economically deprived areas of the inner city where the need of access to services and employment is greatest.</p> <p>Planned development will ensure that appropriate transportation measures are put in place, therefore, providing both residents and employees the opportunity to use different mode shares and contributing towards a healthier lifestyle having a net positive impact on human health.</p>

Table 7.4 (ctd): Alternative 1 – Targets Growth Around Existing Identified Growth Centres

EPOs	Discussion on Alternative 1
BFF1	<p>Through a targeted scenario of the development there would be less pressure on the existing open spaces and the existing sites of ecological importance. There are a number of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) located to the east of the city, including: North Dublin Bay SAC, South Dublin Bay SAC, and the river Tolka SPA and North Bull Island SPA, which have the potential to be impacted by any form of development within the city. Through co-ordinated targeted growth there is a reduced risk of impacting upon these sites. The Docklands and the North Fringe are closest in proximity to the European Sites, however, the Grand Canal Dock and North Lotts Planning Scheme has been subject to both Strategic Environmental Assessment and Appropriate Assessment, as has the North Fringe (Clongriffin-Belmayne) Local Area Plan which, therefore, ensures that the policies and objectives for that area have been rigorously tested in relation to the protection of flora and fauna and in particular European Sites.</p> <p>From the sensitivity mapping in it can be clearly seen that the high environmental sensitivity areas lie to the east of the city, encompasses the aforementioned European Sites and to the west there is a large expanse of high sensitivity which defines the lands of the Phoenix Park. Targeted growth in the city centre will be on the Z5 and Z10 zonings, which for the majority fall within the boundaries of the Royal and Grand Canals, which are both proposed Natural Heritage Areas. This alternative is positive in ensuring a compact city on areas fewer ecological constraints.</p> <p>The SDRAs/KDCs are strategically placed around the city lands as to not be located directly on international ecological sites, however, there are a number of SDRAs/KDCs that are in proximity to nationally designated sites such as those located within or in proximity to the proposed Natural Heritage Areas of the Grand and Royal Canals. The development of the SDRA at Heuston will need to respect the sensitivity of the Phoenix Park in which it lies adjacent to.</p> <p>The development of SDRAs/KDCs will provide positive opportunities for provision of further open spaces that can be sensitively incorporated within residential and employment lands.</p> <p>The redevelopment of brownfield sites, including vacant lands within the city centre could allow opportunities for improvements to flora within the sites and in addition ensure the appropriate removal of any invasive species, if they should exist.</p> <p>All construction activity whether it be located within the canal boundaries or within the SDRA/KDC areas can lead to negative impacts on flora and fauna, but measures can be implemented especially through green infrastructure to compensate such impacts.</p>

Table 7.4 (ctd): Alternative 1 – Targets Growth Around Existing Identified Growth Centres

EPOs	Discussion on Alternative 1
CF1	<p>The consolidated growth within the core Z5 area of the city along with development in the SDRAs/KDCs area will have a positive contribution towards climate change as all new developments will be required to have greater energy efficiency thus providing contribution towards a reduction in greenhouse gas emissions.</p> <p>In addition, as outlined under population and material assets there will be a positive impact in relation to reduced traffic emissions from an increase in modal share of walking, cycling and public transport, thereby having a net positive effect on reducing greenhouse gas emissions.</p> <p>A Strategic Flood Risk Assessment (SFRA) has been undertaken on the lands within Dublin city and plans/projects within the consolidated city centre and the SDRAs/KDCs may be required to undertake further SFRA's. It has been identified that the key rivers that flow through Dublin, such as the river Liffey, the river Tolka, the Santry river and the river Dodder all fall within Flood Zone A, which means that the probability of flooding is greatest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding). There are fewer lands within the Dublin city boundary that fall within the Flood Zone B, which has a moderate probability of flooding (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding). The remaining lands which make up the majority of Dublin city fall into Flood Zone C which is all areas not within zone A or B. Therefore consolidation of the city centre and development within the SDRAs/KDCs will have to take into consideration these flood zones, however, through coordinated development and existing flood alleviation measures that have already been put in place such as the river Dodder flood management study and the protection works in place in Spencer Dock there will be neutral contribution towards flood zone management.</p>
AQ1	<p>This alternative focuses on ensuring that development is either in the consolidated city centre or within one of the SDRAs/KDCs, which are all located along good public transport routes. Therefore, this alternative would facilitate greater proximity of the population to their place of employment and/or schools. This would encourage a greater modal share for sustainable modes of transport such as walking, cycling and public transport. This alternative would reduce the level of car usage having a positive impact on air quality. Currently air quality in Ireland is good, as recorded by the EPA, however, there are still a number of key challenges in relation to air quality, in particular the levels of nitrogen oxides and particulate matter and it is traffic emissions that are directly contributing to breaches above guideline limits.</p> <p>Levels of environmental sound can have a direct link to a populations' quality of life. The provision of targeted planned growth will ensure that both the location and densities of development have taken into consideration environmental sound. If required necessary buffers/mitigation measures are put in place to ensure that residents are not subjected to high levels of noise. This planned growth and consolidation also ensures that the population utilises modes shares such as walking, cycling and public transport. This will contribute towards a reduction of usage of the private car and noise levels associated with the motor car and levels of traffic.</p>

Table 7.4 (ctd): Alternative 1 – Targets Growth Around Existing Identified Growth Centres

EPOs	Discussion on Alternative 1
W1	<p>Development of any nature can have ‘knock on’ impacts on water quality. In the absence of upgrades to infrastructure, the particular negative impact from development within the city boundary is on wastewater services. Such services are already under significant pressure and increased consolidation of the city along with development in SDRAs/KDCs will increase demand. With the establishment of Irish Water and the commitments that have been made to improving wastewater services in the greater Dublin area, capacity issues will be reduced which will reduce pressure on water quality and prevent further deterioration. Future upgrades to the wastewater services will achieve improved treated effluent quality in terms of nitrogen and phosphorus standards.</p> <p>The Eastern River Basin District have classified the rivers within the city boundary as being ‘at risk’ or ‘probably at risk’ of not reaching good status under the Water Framework Directive. The EPA records the biological status of rivers and the latest available data outlines that the waterbodies within the Dublin city development plan boundary are either classified as ‘moderate’ or ‘poor’. Due to the location of Dublin city, at the downstream end of many of the catchments there are issues in relation to upstream pollution from urban runoff, misconnections of wastewater and combined sewer overflows. Therefore, planned development is required along with improvements to wastewater services to ensure protection and enhancement of the water environment and prevent pollution of watercourses.</p> <p>All construction activity has the potential to increase the extent of impermeable surfaces. This can lead to increase flooding, especially pluvial runoff. However, the implementation of Sustainable Urban Drainage Systems (SUDS) will alleviate excessive runoff from new developments, in accordance with appropriate development management standards.</p>
MA1	<p>A targeted approach to growth would result in an improved integration between higher concentrations of development around public transport nodes leading to improvements in relation to public transport investment. This will have positive impacts on the environment as it will improve the uptake of sustainable modal shares will be through this alternative.</p> <p>Positive impacts also apply to water supply and wastewater services as even though there will be increased demand for such services from increased development, a more integrated approach to land use development and the provision of services will apply.</p> <p>The Dublin city development plan lies within the Eastern-Midlands Waste Management Plan and while an increased population will place pressure on waste minimisation, recycling and disposal services, co-ordinated planning, including city centre consolidation along with development of SDRAs/KDCs will have a neutral impact on waste management.</p>
CH1	<p>Development that is targeted and planned has the least likelihood of significantly impacting on quality of Dublin’s built heritage. The city has many sites of archaeological, architectural and cultural heritage importance and there is a constant need to balance development and the protection of such resources. While this scenario outlines targeted growth in the city centre along with development of the SDRAs/KDCs, the likelihood of impact on the cultural fabric is greatest in the city centre where the concentration of cultural assets is highest. However, there are designated conservation areas (Z2 & Z8) which ensure that development is undertaken in a manner that is sympathetic of its surroundings. This scenario will positively contribute towards the objective of ‘New City Living’, which provides financial assistance towards the refurbishment of existing protected structures and other historic properties built before 1914 that are located in neglected city centre locations. The aim of this initiative is to protect vulnerable historic fabric and thereby will have a positive impact on cultural assets.</p> <p>The targeted development within the SDRAs/KDCs will have less potential impact on cultural assets though some lie within or in proximity to some conservation areas. However, development on greenfield sites has the potential to uncover unknown archaeological potential.</p>

Table 7.4 (ctd): Alternative 1 – Targets Growth Around Existing Identified Growth Centres

EPOs	Discussion on Alternative 1
L1	<p>There would be positive impacts on both landscape and soils due to co-ordinated consolidation of the city centre with particular focus on developing vacant lands. This focus on development on brownfield sites and vacant lands would provide residential and employment lands and alleviate the rate of undeveloped lands requiring developed thus protecting the soil fabric.</p> <p>The regeneration of sites within the city centre will have positive visual impacts on the urban fabric and improvements to protected structures in neglected city centre locations will all have a positive impact on the general urban landscape.</p> <p>There are a number of open spaces with the city boundary that are under consideration for the designation of Landscape Conservation Area. These include the Phoenix Park, North Bull Island, the Botanic Gardens and St Anne’s Park all of which are outlined as environmentally sensitive areas on. Planned development within the city centre and the SDRAs/KDCs will result in less impact on such open spaces.</p>

Table 7.5: Alternative 2 – Market-led Growth

EPOs	Discussion on Alternative 2
PH1	<p>A market-led approach would lead to development occurring on lands at the edge of currently developed areas – with less developed public transport link and infrastructure capacity, such a water supply or foul drainage.</p> <p>Market-led growth would provide residential dwellings and employment opportunities but in a sporadic manner which would reduce the benefits of integration of public transport and development.</p> <p>The appropriate consolidation and creation of a compact city would not occur as there would be no specific focus on growth in existing developed areas, the SDRAs and KDCs. There would be no assurance that growth (in particular residential units) would be located next to existing transport corridors. There would be a long-term negative impact on population and human health due to this unco-ordinated development which would consolidate over the long term but in the short term the opportunity would be lost to maximise the location of housing, employments and services in close proximity.</p> <p>Speculative development pressure would most likely increase on inappropriate sites, including recreational and sporting facilities.</p> <p>There would be no assurance that the vacant lands within the canal zone would be developed and this would have negative impacts on the focus towards a sustainable compact city. It would be unknown as to whether initiatives such as ‘New City Living’ would develop to their maximum potential from a lack of focus in relation to city centre development.</p>

Table 7.5 (ctd): Alternative 2 – Market-led Growth

EPOs	Discussion on Alternative 2
BFF1	<p>As outlined under Alternative 1, there is a concentration of high environmental sensitivity in the east and west of the city boundaries as outlined in , which stems from the international and local ecological designations. Market-led growth could have long-term negative impacts on flora and fauna from ad hoc uncoordinated development that may not be sensitive to ecological requirements. There could also be increased pressure on existing open spaces, if provision is not incorporated within the market-led scenario for additional open spaces and recreational areas within developed lands.</p> <p>It is unknown as to whether brownfield and vacant lands would be developed and in so doing the potential benefit towards improvements in flora and removal of invasive species, if resident on the lands, is removed.</p> <p>All construction activity whether it be located within the canal boundaries or within the SDRAs/KDC areas can lead to negative impacts on flora and fauna, but measures can be implemented especially through green infrastructure to compensate such impacts.</p>
CF1	<p>Even though this scenario will be market-led and unco-ordinated it will have (in respect of the buildings) a positive contribution towards climate change as all new developments (buildings) will be required to have greater energy efficiency thus providing contribution towards a reduction in greenhouse gas emissions.</p> <p>It is unlikely this scenario will positively contribute to reduced traffic emissions from increases in modal share of walking, cycling and public transport, which would have a negative effect on reducing greenhouse gas emissions in respect of transport emissions.</p> <p>A Strategic Flood Risk Assessment (SFRA) has been undertaken on the lands within Dublin city and future development plans/projects may be required to undertake further SFRAs. It has been identified that the key rivers that flow through Dublin, such as the river Liffey, the river Tolka, the Santry river and the river Dodder all fall within Flood Zone A. There are fewer lands within the Dublin city boundary that fall within the Flood Zone B, which has a moderate probability of flooding. The remaining lands which make up the majority of Dublin city fall into Flood Zone C which is all areas not within zone A or B. As this scenario is market-led it is unknown where the development may occur and whether it will be located near to flood zones that have a higher risk of the land flooding such as Flood Zone A and B or whether it will be located on lands that already have protection measures in place. There is an unknown impact from this scenario due to the lack of knowledge on where the development may occur.</p>
AQ1	<p>This scenario lacks any focus in relation to the development of land uses and does not strive to consolidate the city centre and the SDRAs/KDCs. In relation to air quality this lack of consolidation and development in areas located in proximity to transport corridors would have the potential to have an overall negative impact on air quality within Dublin, as it is likely that residents would have to use their car more to access schools and employment. The unco-ordinated development would not lend itself to a population base that focuses on mode shares such as walking, cycling and public transport which are all positive in relation to air quality. As previously outlined, current air quality in Ireland is good, however, there are still a number of key challenges in relation to air quality, in particular, the levels of nitrogen oxides and particulate matter and it is traffic emissions that are directly contributing to breaches above guideline limits.</p> <p>Levels of environmental sound can have a direct link to a populations' quality of life. The provision of market-led growth will not provide any assurance that the location and densities of the zonings have taken consideration of environmental sound. Through this unco-ordinated planning there is the unfortunate possibility that necessary buffers may not be put in place for residents being subjected to high levels of noise. It is likely that the levels of private car usage will be high due to lower population numbers taking up the mode shares of walking, cycling and public transport, thereby having a negative impact on acoustic quality.</p>

Table 7.5 (ctd): Alternative 2 – Market-led Growth

EPOs	Discussion on Alternative 2
W1	<p>Development of any nature can have ‘knock on’ impacts on water quality. In particular, market-led ad hoc development will lead to greater pressures on wastewater services as there will be an increased challenge to provide such services to unco-ordinated development. Even with the establishment of Irish Water the pursuit of market-led ad hoc development would make the planned investments in infrastructure more difficult to implement. Therefore this increased pressure on existing wastewater services will have a resultant impact on water quality.</p> <p>In addition, unco-ordinated development could lead to insufficient open space provision which could have potential increase in surface water flooding.</p> <p>All construction activity has the potential to increase the extent of impermeable surfaces. This can lead to increase flooding, especially pluvial runoff. However, the implementation of Sustainable Urban Drainage Systems (SUDS) will alleviate excessive runoff from new developments, in accordance with appropriate development management standards.</p>
MA1	<p>Market-led ad hoc development does not lend itself to integration with public transport and this could have negative impacts on the viability of public transport routes within the city.</p> <p>In addition, ad hoc development that is market-led will affect water supply and wastewater services as there will not be the provision of an integration approach to land use development and the provision of necessary services.</p> <p>The same issues apply to waste management as while an increased population will place pressure on waste minimisation, recycling and disposal services the ad hoc and unknown approach to market-led development could place negative impacts on waste management services.</p>
CH1	<p>The unplanned nature of market-led development leads to unknown impacts in relation to cultural heritage. There are potential negative impacts to uncovering unknown archaeological sites through development on greenfield sites.</p> <p>Market-led development has the potential to conflict with the quality of Dublin’s built heritage. The scenario may not be mindful of the sensitive nature of the archaeological, architectural and cultural heritage sites within the city centre and the balance that is required between development and protection of cultural heritage.</p> <p>The market-led approach could lead to adverse consequences in respect of the built heritage and architectural character. This approach would erode the character and quality of residential neighbourhood areas in the city.</p> <p>It is unknown as to whether this scenario will positively contribute towards the objective of ‘New City Living’ which provides financial assistance towards the refurbishment of existing protected structures and other historic properties that are located in neglected city centre locations. The scenario may or may not assist with the protection of the vulnerable historic fabric.</p>
L1	<p>As with the other Environmental Protection Objectives it is unknown as to the level of protection of the urban and sub-urban landscape from this scenario. There could be many positive impacts if there was consolidation of the city centre and development on the brownfield and vacant land sites but is unknown as to where the market will drive the development. Again the market-led scenario could drive the remediation of sites within the city centre having positive visual impacts on the urban fabric and improve protected structures in neglected city centre locations.</p> <p>It is unknown as to the level of development that could occur within the SDRAs/KDCs. There is more likelihood that market-led development could have greater impact on existing open spaces and provide less potential to create green corridors with new developments. The existing open spaces that are under consideration for the designation of Landscape Conservation Area, including the Phoenix Park, North Bull Island, the Botanic Gardens and St Anne’s Park could be impacted upon through ad hoc development occurring.</p>

Table 7.6: Alternative 3 – Selected Concentration of Growth Targeted on Existing SDR/KDC/ SDZ areas – Elements of a phased approach to the development of land

EPOs	Discussion on Alternative 3
PH1	<p>This scenario clearly outlines the potential negative impacts on population from a lack of focus on the development of the core city centre and, therefore, the sustainable consolidation will not be achieved. Lack of consolidation within the core city centre and the Z5 and Z10 lands and the focus on other areas will lead to a dispersed population. Whilst the development within the SDR/KDC/SDZ areas is positive for the residential population and employment opportunities it may lead to a city centre that lacks a resident population. The vacant lands and brownfield sites within the city centre will not be prioritised and 'New City Living' initiatives will be jeopardised.</p> <p>The dispersed nature of the resident/employment base solely through the SDR/ KDC areas could hinder employment opportunities if a strict phasing regime would be implemented. Restrictions on potential development in such zones would dis-benefit the resident population.</p>
BFF1	<p>For this scenario there would be potential negative impacts on greenfield development as lack of development on the city centre Z5 and Z10 lands will push all development out to the SDR and KDC areas. However, there will also be positive benefits to flora and fauna from development within the SDR/KDC/SDZ areas through provision of positive opportunities for enhancement and provision of open spaces that can be sensitively incorporated within residential and employment lands.</p> <p>It is unknown as to whether brownfield and vacant lands would be developed and in so doing the potential benefit towards improvements in flora and removal of invasive species, if resident on the lands, is removed.</p> <p>All construction activity whether it be located within the canal boundaries or within the SDR/KDC/SDZ areas can lead to negative impacts on flora and fauna but measures can be implemented especially through green infrastructure to compensate such impacts.</p>
CF1	<p>The development in the SDRs/KDCs area will have (in respect of the buildings) a positive contribution towards climate change as all new developments (buildings) will be required to have greater energy efficiency thus providing contribution towards a reduction in greenhouse gas emissions.</p> <p>It is unlikely this scenario will positively contribute to reduced traffic emissions from increases in modal share of walking, cycling and public transport, which would have a negative effect on reducing greenhouse gas emissions in respect of transport emissions.</p> <p>A Strategic Flood Risk Assessment (SFRA) has been undertaken on the lands within Dublin city and plans/projects within the SDRs/KDCs may be required to undertake further SFRA's. It has been identified that the key rivers that flow through Dublin, such as the river Liffey, the river Tolka, the Santry river and the river Dodder all fall within Flood Zone A, which means that the probability of flooding is greatest. There are fewer lands within the Dublin city boundary that fall within the Flood Zone B, which has a moderate probability of flooding. The remaining lands which make up the majority of Dublin city fall into Flood Zone C, which is all areas not within Zone A or B. Therefore, development within the SDRs/KDC/SDZs will have to take into consideration these flood zones. However, through co-ordinated development within the SDRs/KDC/SDZs and existing flood alleviation measures that have already been put in place such as the river Dodder flood management study and the alleviation measures along the river Tolka there will be neutral contribution towards flood zone management.</p>

Table 7.6 (ctd): Alternative 3 – Selected Concentration of Growth Targeted on Existing SDRA/KDC/ SDZ areas – Elements of a phased approach to the development of land

EPOs	Discussion on Alternative 3
<p>AQ1</p>	<p>Co-ordinated planning in the SDRAs/KDC/SDZs will be positive in relation to clustered development of land uses which will favour sustainable transport links. There is also the possibility due to their distance from the city centre that a certain percentage of the population will use the private motor car to access employment. This would have a potential knock on negative impact on local air quality as already outlined current air quality in Ireland is good, however, there are still a number of key challenges in relation to air quality, in particular, the levels of nitrogen oxides and particulate matter and it is traffic emissions that are directly contributing to breaches above guideline limits.</p> <p>Levels of environmental sound can have a direct link to a populations' quality of life. The provision of targeted planned growth in the SDRAs/KDC/SDZs will ensure that both the location and densities of the zonings have taken consideration of environmental sound and that if required necessary buffers are put in place to ensure that residents are not subjected to high levels of noise.</p>
<p>W1</p>	<p>Development of any nature can have 'knock on' impacts on water quality. Development in the SDRAs/KDC/SDZs will place demands on existing wastewater infrastructure. With the establishment of Irish Water and the commitments that have been made to improving wastewater services there is potential that such issues will be mitigated and in so doing will reduce pressure on water quality and prevent further deterioration. Future upgrades to the wastewater services will achieve improved treated effluent quality in terms of nitrogen and phosphorus standards.</p> <p>The Eastern River Basin District have classified the rivers within the city boundary as being 'at risk' or 'probably at risk' of not reaching good status under the Water Framework Directive. The EPA records the biological status of rivers and the latest available data outlines that the waterbodies within the development plan boundary are either classified as 'moderate' or 'poor'. Due to the location of Dublin, being at the downstream end of many of the catchments there are issues in relation to upstream pollution from urban runoff, misconnections of wastewater and combined sewer overflows. Therefore, targets and planned development is required along with improvements to wastewater services to ensure protection and enhancement of the water environment.</p> <p>All construction activity has the potential to increase the extent of impermeable surfaces. This can lead to increase flooding, especially pluvial runoff. However, the implementation of Sustainable Urban Drainage Systems (SUDS) will alleviate excessive runoff from new developments, in accordance with appropriate development management standards.</p>

Table 7.6 (ctd): Alternative 3 – Selected Concentration of Growth Targeted on Existing SDRAs/KDC/ SDZ areas – Elements of a phased approach to the development of land

EPOs	Discussion on Alternative 3
MA1	<p>Whilst the positive aspects of Alternative 1 will be accounted for in terms of planned development there will be issues in relation to justification of public transport as the growth of the city will be focused on the sub-urban areas. This could have negative impact on the environment if the sustainable modal share of walking, cycling and public transport is not embraced by the population.</p> <p>Positive impacts also apply to water supply and wastewater services as even though there will be increased pressure on such services from increased populations, a more integrated approach to land use development and the provision of services will apply.</p> <p>The Dublin city development plan lies within the Eastern-Midlands Waste Management Plan and while an increased population will place pressure on waste minimisation, recycling and disposal services, co-ordinated planning, including development of SDRAs/KDC/SDZs will have a neutral impact on waste management.</p>
CH1	<p>This scenario will target development within the SDRAs/KDCs and will have less potential impact on cultural assets with the exception of Grangegorman, Heuston and Digital Hub that lie within or in proximity to some conservation areas. Development on greenfield sites always has the potential to uncover unknown archaeological sites and there is, therefore, a potential negative impact as the focus of the scenario is on development of the SDRAs/KDCs and there is no focus on consolidation of the city centre.</p> <p>The benefits that come from 'New City Living' will not be harnessed and sites of architectural and cultural heritage importance will not obtain the financial assistance towards refurbishment of existing protected structures and other historic properties that are located in neglected city centre locations.</p>
L1	<p>This scenario lacks any meaningful consolidation of the city centre and there are, therefore, little potential urban landscape benefits resulting from development on brownfield sites and vacant lands.</p> <p>Development will be emphasized on the SDRAs/KDC/SDZs, which will bring positive impacts through the creation of green corridors, but it will mean that the sub-urban spread will increase as there will be less consolidation of the city centre and surrounding Z10 sub-urban areas.</p> <p>There are a number of open spaces with the city boundary that are under consideration for the designation of Landscape Conservation Area. These include: the Phoenix Park, North Bull Island, the Botanic Gardens and St Anne's Park, all of which are outlined as environmentally sensitive areas on . Planned development within the SDRAs/KDCs will mean less potential impact on open spaces.</p>

7.6 Preferred Alternative

Based on the assessment of the alternatives, it can be concluded that Alternative 1, the Targeted Growth around existing identified growth centres scenario is the preferred scenario.

This alternative seeks to target and consolidate growth around the Z5 city-centre mixed use zoning area as well as existing identified growth centres such as the Strategic Development Zones and areas identified in Local Area Plans. The Council would favour the development of vacant lands within the canal area of the city and to incentivise owners to redevelop these lands. This alternative examines changing the wording of Z10 (Inner Suburban Sustainable Mixed-Use) land use areas to allow for residential as the prominent use outside the canals and more mixed use within the canals.

Economic and population growth in targeted strategic locations, such as key development areas would be likely to safeguard the amenities and character of established residential areas and at the same time to facilitate the essential growth of the city in line with regional plans and forecasts.

The alternative scenarios are reasonably distinct and provide an overview of the options available in formulating and integrating the consideration of alternatives into the Core Strategy for the City Plan, having regard to national and regional plans. Having evaluated the alternative scenarios, the potential impacts of each are identified thus informing the selection of a preferred alternative for the City Development Plan.

Alternative 1 will contribute to sustainable development and as such will result in

positive impacts against the Environmental Protection Objectives.

Alternative 2 the market-led scenario had more negative impacts on the environment than both scenario 1 and scenario 3. The absence of positive impacts is largely due to the ad hoc planning that could occur from such an approach. Consequently there may be impacts such as on quality of life and increased greenhouse gas emissions from growing car dependency due to the potential lack of strategic planning and consolidation of the city.

Alternative 3 has some positive impacts when measured against the Environmental Protection Objectives as it is similar to Alternative 1 with the exception that it does not have a focus on consolidation of the city centre.

The preferred scenario is discussed further in **Chapter 08**.

08

Evaluation of the Dublin
City Development Plan
2016–2022

8.1 Introduction

SEA legislation requires the Environmental Report to include the likely significant effects on the environment of implementing the Plan. This includes secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects. This evaluation assesses the likely or potential significant effects on the environment, i.e., on biodiversity, human health, fauna, flora, soil, water air, climatic factors, material assets, cultural heritage (including architectural heritage) and soils and landscape and interrelationship between the above. This assessment is done on a chapter-by-chapter basis which contain the policies and objectives of each chapter. Chapter 02 is also screened which is the Vision and Core Strategy and also Chapter 14 Land Use Zoning.

8.1.1 Evaluation Methodology

The assessment of the likely significant effects on the environment of implementing the development plan was carried out, in accordance with best practice methodology. The methodology employed was the same as that employed in testing the alternatives. This is a commonly used methodology of creating a matrix, whereby the policies and objectives of the plan are listed on one axis and the environmental protection objectives on the other. The policies and objectives of the plan were tested against the Environmental Protection Objectives developed earlier in the SEA process.

To avoid the Environmental Report being dominated by a series of complex matrices these detailed matrices have been included as appendices in this report (see Appendix A) while a summary of the significant environmental impacts are provided in **Tables 8.1 to 8.10** below.

As outlined in below, a plus (+) indicates a potential positive impact, minus (-) indicates a potential negative impact, a (?) outlines that in the absence of further detail the impact is unclear, and a neutral or no impact is indicated by a zero (0). Combinations of these symbols are also possible, e.g., (+/-) indicates that both positive and negative impacts are likely or (0/-), which indicates that impact may be neutral or negative depending on how the policy or objective within the scenario is delivered. It should be noted that where impacts are increased, this increased level of impact has been recorded with double symbols, e.g. ++ or --.

Table 8.1: Evaluation Criteria

Will the implementation of the alternative serve to have:	
A significant beneficial impact on the environmental receptor	+
A significant adverse impact on the environmental receptor	-
An uncertain impact on the environmental receptor	?
An insignificant impact or no relationship with the environmental receptor	0

8.2 Population and Human Health

The policies of the development plan have been found to have overall significant beneficial impacts on population and human health. Implementing this plan will offer people the opportunity of living in a more sustainable urban compact city, with the potential for a good quality of life. However, this is dependent on the delivery of significant infrastructure including upgrade to the Wastewater Treatment Plan, and also the supply of adequate water supply to meet the needs of the growing population. Since the 1 January 2014 Irish Water is responsible for all public water services, involving the supply of drinking water and the collection, treatment and disposal of wastewater. The expansion and upgrading of the Ringsend Wastewater Treatment Plan is an urgent priority for Irish Water. It is intended to upgrade, expand the treatment works to a capacity of c. 2.1 million PE from 1.64 million PE. The Greater Dublin Strategic Drainage Study has identified the need for the Greater Dublin Regional Wastewater Treatment Plant, Marine Outfall and orbital sewer in north Co. Dublin to protect the environment and secure the future economic, commercial, industrial and residential needs of the Greater Dublin Area after 2022.

The plan promotes the development of a compact, quality, green, clean and connected city with plan policies all reflecting the desire to achieve this. The plan emphasises the need to integrate land uses and transportation and sets out a strategy for mixed-use, thriving economic and residential environment underpinned by recreational and community infrastructure provided in a

timely fashion, in accessible locations and connected to, or within easy reach of, good public transport networks. Initiatives such as the creation of a green network have potential for significant beneficial impacts on the city's recreational needs.

The plan also contains a new chapter 'Addressing Climate Change' which seeks to prioritise measures to address climate changes, and also to promote energy efficiency, energy conservation and increased use of renewable energy

A Strategic Flood Risk Assessment has been carried out for the Development Plan, which sets out the flood risk management strategy for the city. The plan also contains a number of policies and objectives to address flooding in the city from all potential sources of flooding. Furthermore, development plan policy facilitates and encourages economic growth and renewal to strengthen the city as the state's main economic engine with an emphasis on innovation and clustering of economic activity while also encouraging energy efficiency, reduction of toxic emissions and greenhouse gases. Economic policies promote the promotion of sustainable development by balancing complex sets of environmental, social or economic goals in planning decisions which can only prove to be positive for population and human health. The plan policies and objectives are all geared towards facilitating a city to be more enterprising, connected, sustainable, inclusive and attractive. Overall the plan will ensure the future development of a city of communities and neighbourhoods where people choose to live and work for long periods of their lives and raise a family if they so wish.

See **Table 8.2** for a summary of potential impacts of the development plan on population and human health.

Table 8.2: Summary of Impacts of the Dublin City Development Plan 2016–2022 on Population and Human Health

Development Plan Policies/Objectives	Summary of Significant Impacts on Population and Human Health
Vision and Core Strategy	Significant Beneficial Impacts
Addressing Climate Change	Significant Beneficial Impacts
Shape and Structure of the City	Significant Beneficial Impacts
Quality Housing	Significant Beneficial Impacts
City Economy and Housing	Significant Beneficial Impacts
Movement and Transport	Significant Beneficial Impacts
Sustainable Environmental Infrastructure	Significant Beneficial Impacts
Open Space and Recreation	Significant Beneficial Impacts
Culture and Heritage	Significant Beneficial Impacts
Sustainable Communities and Neighbourhoods	Significant Beneficial Impacts
Land Use Zoning	Significant Beneficial Impacts

8.2.1 Biodiversity, Flora and Fauna

The plan was found largely to have potential for significant beneficial effects on the biodiversity, flora and fauna of the city. Overall the plan promotes a more compact city in a consolidated format with certain areas designated for intensification of development, avoiding the sprawl of development out to the urban fringes and onto greenfield sites. The plan also seeks to implement good planning practice and encouraging the reuse of brownfield and vacant sites. Such an approach concentrates new development largely into built-up, well-connected urban areas whilst avoiding more environmentally sensitive and vulnerable sites.

The plan also encourages opportunities to protect existing, and create new, habitats through the inclusion of such initiatives as the creation of a multi-functional green network which includes areas of high biodiversity value. Emphasis is also placed on the protection of designated, as well as undesignated sites, of high biodiversity value.

The plan places emphasis on intensification, higher density, population and economic growth and development over the lifetime of the plan and beyond, however, this is dependent on the delivery of significant infrastructure, including upgrade to the Wastewater Treatment Plan, and also the supply of adequate water supply to meet the needs of the growing population. The expansion and upgrading of the Ringsend Wastewater Treatment Plan is an urgent priority for Irish Water and it is intended to upgrade and expand the treatment works to a capacity of c. 2.1 million PE from 1.64 million PE. The Greater Dublin Strategic Drainage Study has identified the need for the Greater Dublin Regional Wastewater Treatment Plant, Marine Outfall and orbital sewer in north Co. Dublin to protect the environment and secure the future economic, commercial, industrial and residential needs of the Greater Dublin Area after 2022.

A policy has been put into the plan to ensure that development is permitted in tandem with available water supply and wastewater and to manage development, so that new schemes are permitted only

where adequate capacity or resources exists or will become available within the life of a planning permission (see policy SI3).

There are a number of policies in the plan which increase accessibility generally, including: pedestrian and cyclist access to rivers, canals, areas of natural recreation, private recreational lands, etc., could also have potential significant adverse impacts in terms of disturbance, fragmentation or loss of habitats unless mitigated against. The plan seeks to mitigate these effects by implementing good planning practice and protecting biodiversity and also polices to create additional open space and habitats. There is also a policy in the plan which requires that any plan/project, either individually or in combination with other plans or projects that has the potential to give rise to significant effect on the integrity of any European Site(s) shall be subject to an appropriate assessment in accordance with Article 6(3) and 6(4) of the EU Habitats Directives.

See **Table 8.3** for a summary of potential impacts of the plan on biodiversity, flora and fauna.

Table 8.3: Summary of Impacts of the Dublin City Development Plan 2016–2022 on Biodiversity, Flora and Fauna

Development Plan Policies	Summary of Significant Impacts on Biodiversity, Flora and Fauna
Vision and Core Strategy	<p>Some beneficial impacts as intensification of the city allows for the avoidance of building on or near natural areas and areas/sensitive and valuable habitats</p> <p>Policies to consolidate the city in the region could have potential significant adverse impact on water quality a result of limitations on the wastewater treatment capacity which could potentially have a significant adverse impact on water-based habitats in the city.</p>
Addressing Climate Change	<p>Mainly beneficial impacts as all policies and objective to address climate change and the use of renewable energies and more sustainable energy use, will have significant beneficial impacts on our environment and, therefore, on our biodiversity.</p>
Shape and Structure of the City	<p>Some beneficial impacts as intensification of the city allows for the avoidance of building on or near natural areas and areas/sensitive and valuable habitats.</p> <p>Policies to consolidate the city could have potential significant adverse impacts on water quality a result of limitations on the wastewater treatment capacity which could in turn potentially have significant adverse impacts on water-based habitats in Dublin Bay.</p> <p>There are a number of policies in the plan which increase accessibility generally, including: pedestrian and cyclist access to rivers, canals, areas of natural recreation, private recreational lands, etc., which could also have potential significant adverse impacts in terms of disturbance, fragmentation or loss of habitats unless mitigated against.</p>
Quality Housing	<p>Some beneficial impacts as intensification of the city allows for the avoidance of building on or near natural areas and areas/sensitive and valuable habitats.</p> <p>Policies to consolidate the city could have potential significant adverse impacts on water quality a result of limitations on the wastewater treatment capacity which could in turn potentially have significant adverse impacts on water-based habitats in Dublin Bay.</p> <p>Largely insignificant impacts.</p>
City Economy and Enterprise	<p>Some policies which promote the increase in supply of commercial space, and to consolidate the city could have potential significant adverse impacts on water quality a result of limitations on the wastewater treatment capacity which could in turn potentially have significant adverse impacts on water-based habitats in Dublin Bay.</p> <p>Most policies and objectives would have insignificant impacts.</p>
Retailing	<p>Some policies which promote increase in supply of retail floor space, could have potential significant adverse impacts on water quality a result of limitations on the wastewater treatment capacity which could in turn potentially have significant adverse impacts on water-based habitats in Dublin Bay.</p> <p>Most policies and objectives would have insignificant impacts.</p>

Table 8.3 (ctd): Summary of Impacts of the Dublin City Development Plan 2016–2022 on Biodiversity, Flora and Fauna

Development Plan Policies	Summary of Significant Impacts on Biodiversity, Flora and Fauna
Movement and Transport	<p>Largely insignificant impacts with some significant beneficial impacts as policies and objectives to promote modal shift will reduce CO2 emissions and improve air quality around the city which will have beneficial impacts on biodiversity.</p> <p>Policies to create new Strategic Cycle Ways could have the potential to significantly adverse impact, on existing habitats in terms of fragmentations and disruption of habitats.</p> <p>Policies to consolidate the city in the region could have potential significant adverse impact on water quality a result of limitations on the wastewater treatment capacity which could potentially have a significant adverse impact on water-based habitats in the city.</p> <p>An uncertain impact was put against the policy to promote and facilitate provision of Metro, Dart, Underground, etc. It should be noted that an overarching policy to be inserted into the transport chapter to ensure that any plan/project, either individually or in combination with other plans or projects that has the potential to give rise to significant effect on the integrity of any European site(s) shall be subject to an appropriate assessment in accordance with Article 6(3) and 6(4) of the EU Habitats Directives.</p>
Sustainable Environmental Infrastructure	<p>Some of the policies and objectives were found to have insignificant impacts on, or no relationship with, biodiversity, flora and fauna.</p> <p>Significant beneficial objectives were noted which provide for improved water quality and groundwater. Policies were put in the plan to support Irish Water in the provision of a high quality drinking water, water conservation and the development and improvement of new water and wastewater systems. Also a policy was put in to support the upgrading of the Ringsend Wastewater Treatment Plant and to support the development of the Regional Wastewater Treatment Plan in Fingal, the North Docklands Sewage Scheme, the Marine Outfall and also the orbital sewer. This infrastructure will have significant beneficial impacts on the water quality in Dublin Bay.</p> <p>An uncertain impact was put against the policy to promote and enhance electricity /gas and associated networks in terms of what impact this could potentially have. The policy does, however, state that this is subject to the relevant Irish planning and European Legislation, including Article 6 of the Habitats Directive and or/environmental assessment.</p> <p>Policies to improve air quality will also have significant beneficial impacts on the biodiversity flora and fauna in the area.</p>
Open Space and Recreation	<p>Policies and objectives were generally found to have largely significant beneficial impacts on biodiversity, flora and fauna.</p> <p>Policies to interconnect new greenways and create new linear parks along waterways could have the potential to significantly adverse impact, on existing habitats in terms of disruption of habitats. Spread of invasive species.</p> <p>Both potential positive and negative impacts were noted about increase visitor facilities at North Bull Island. Potential increase in visitors could potentially have impacts on biodiversity and disturbance to habitats.</p>

Table 8.3 (ctd): Summary of Impacts of the Dublin City Development Plan 2016–2022 on Biodiversity, Flora and Fauna

Development Plan Policies	Summary of Significant Impacts on Biodiversity, Flora and Fauna
Culture and Heritage	Overall insignificant impacts. Some beneficial impacts were noted which promote protection of trees in conservation areas.
Sustainable Communities and Neighbourhoods	Largely insignificant impacts.
Land Use Zoning	Largely insignificant impacts. The principal of zoning land for the anticipated development needs of the economy and society could have potential significant adverse impacts on water quality as a result of limitations on the wastewater treatment capacity which could in turn potentially have significant adverse impact on water-based habitats in Dublin Bay.

8.2.2 Climatic Factors

The Core Strategy of the Development Plan is based on the development of a compact city that makes efficient use of land located in close proximity to good public transport links, both existing and those planned for in the near future, thus minimising urban sprawl. While additional residential and economic activity will be facilitated and take place in the city, which could result in increased greenhouse gases, this potential negative impact is offset by the fact that development will take place in well connected, accessible locations served by excellent public transport infrastructure which will reduce the need to travel by private car to less accessible locations on the urban fringe and beyond. Overall climatic conditions will be improved with the development of a more compact, consolidated city in a mixed-use format and some clustering with retail, commercial, employment, residential and recreational uses all within easy reach of one another either on foot, by bicycle or on public transport. Good public transport linkages, both existing and significant improvements in the future, underpin the sustainable planning approach of the plan.

Such an approach will significantly reduce the need to travel by private car, which in turn will result in less waste of energy, reduced emissions of greenhouse gases and reduces the risk of flooding as a result of climate change.

A Strategic Flood Risk Assessment has been carried out for the city, which sets out a Flood Management Strategy and specific set of policies and objectives for flooding.

Some short-term impacts on climatic factors will occur (particularly in relation to the emissions of greenhouse gases and use of energy) as a result of increased development and construction but these would not be considered significant.

Chapter 03 of the Plan, which is entitled Addressing Climate Change, sets out a number of policies and objectives to address climate change, which encourage more sustainable energy sources and energy efficiency.

Table 8.4 provides a summary of potential impacts of the development plan on climatic factors.

Table 8.4: Summary of Impacts of the Dublin City Development Plan 2016– 2022 on Climatic Factors

Development Plan Policies	Summary of Significant Impacts on Climatic Factors
Vision and Core Strategy	Policies consolidating the city would have a significant positive impact on climate which reduces the need to travel, promoting accessibility of the city, promoting more sustainable forms of transport such as walking, cycling, use of public transport all reducing the need to travel by unsustainable forms of transport etc.
Addressing Climate Change	Most policies and objectives would have a significant positive impacts on climate with objectives to implement the National Climate Change Adaption Framework, adopting a Climate Change Adaption Strategy for Dublin city, reducing waste of energy, maximising use of renewable energy source/energy efficiency, promoting the concept of a carbon-neutral sustainable communities/promoting green industries/to undertake an spatial energy demand analysis in conjunction with Codema/and also polices to address flood risk.
Shaping and Structure of the City	<p>A number of policies having a significant positive impact on climate through policies consolidating the city which reduces the need to travel, promoting accessibility of the city, promoting more sustainable forms of transport such as walking, cycling, use of public transport all reducing the need to travel by unsustainable forms of transport, etc.</p> <p>Remaining policies having an insignificant impact upon climatic factors.</p>
Quality Housing	A number of policies would have significant positive impacts on climate through policies consolidating the city and encouraging high quality energy efficient housing in sustainable mixed use neighbourhoods. Polices which promote energy efficiency, renewable energy and improved energy performance will all have significant positive impacts on climate change.
City Economy and Enterprise	<p>Polices which promote a safe green quality of place would have significant positive impacts on climate.</p> <p>Remaining policies having an insignificant impact upon climatic factors.</p>
Retailing	No significant adverse impacts found.
Movement and Transport	There are a significant number of policies that have a significant positive impact on above as they promote accessibility, walking and cycling routes in the city which reduces the need to travel by unsustainable transport modes such as private car.
Sustainable Environmental Infrastructure	A number of policies and objectives would have significant beneficial impacts on climatic factors, particularly on flood prevention and management and also those promoting improved air quality.
Open Space and Recreation – Green Infrastructure	There are a significant number of policies that have a significant positive impact on climate, which promote green infrastructure solutions into new developments, promote accessibility, walking and cycling routes in the city which reduces the need to travel by unsustainable transport modes such as private car. A number of objectives are also included which protect trees, hedgerows, and identify opportunities for new tree planting, these would all have significant positive impacts on climate change.
Culture and Heritage	Overall insignificant impacts.

Table 8.4 (ctd): Summary of Impacts of the Dublin City Development Plan 2016–2022 on Climatic Factors

Development Plan Policies	Summary of Significant Impacts on Climatic Factors
Sustaining Communities and Neighbourhoods	Overall insignificant impacts. Policies which encourage sustainable residential development would have positive impacts on climate.
Land Use Zoning	Largely insignificant impacts. One of the principles for the zoning chapter would be to ensure that land use zoning spatially facilitates the aims of the core strategy and the desire to develop a compact, clean, green, connected city. This would have significant positive impacts on climate.

8.2.3 AIR (Air Quality and Noise)

Overall the development plan will have significant beneficial impacts on air.

Dublin city's air quality is currently good. Emissions from the transport sector are the main threat to air quality in the city. The plan is based on a compact, consolidated, more intense mixed-use city and reducing urban sprawl with a good integrated public transport network. While additional residential and economic activity will be facilitated and take place in the city over the lifetime of the 2016 – 2022 Development Plan, which could result in increased greenhouse gases, this development will take place in a higher density and a clustering format, in areas that are well connected by existing and future integrated public transport networks. The emphasis throughout the plan is on reducing the need to travel by private car whilst encouraging and facilitating modal change to more sustainable forms of transport e.g. travel by foot, bicycle and public transport. Reducing the need to travel by unsustainable forms of transport, as the plan policies facilitate, will serve to have significant beneficial impacts on the air quality of the city.

In relation to noise, again transport is the main issue. Traffic noise is the dominant noise source in the city. The emphasis throughout the plan is on reducing the need to travel by private car whilst encouraging and facilitating modal change to more sustainable forms of transport e.g. travel by foot, bicycle and public transport. Reducing the need to travel, as the plan policies facilitate, will serve to have significant beneficial impacts in terms of noise in the city.

Table 8.5 provides a summary of potential impacts of the development plan on air and noise.

Table 8.5: Summary of Impacts of the Dublin City Development Plan 2016– 2022 on Air and Noise

Development Plan Policies	Summary of Significant Impacts on Air
Vision and Core Strategy	The Core Strategy promotes intensification and consolidation of the city, by way of infill and brownfield regenerations, regenerations and renewal of the inner city, redevelopment of strategic regeneration areas and the use of higher densities along public transport corridors. This will offer a significant proportion of the new population of living in more sustainable urban centres, encouraging a modal shift to public transport which will all benefit both air and noise quality in the city.
Addressing Climate Change	Some policies and objectives were found to have significant beneficial impact on air and noise quality. Policies and objectives which promote renewable energy, sustainable energy use and efficiency, carbon neutral communities, green industries all would have significant beneficial impacts on both noise and air quality of Dublin.
Shape and Structure of the City	<p>Some policies and objectives that promote intensification and consolidation of the city, by way of infill and brownfield regenerations, regenerations and renewal of the inner city, redevelopment of strategic regeneration areas and the use of higher densities along public transport corridors. This will offer a significant proportion of the new population of living in more sustainable urban centres, encouraging a modal shift to public transport which will benefit both air and noise quality in the city.</p> <p>Policies and objectives that promote pedestrian and cycle ways also have beneficial impacts on noise and air quality and policies promoting a modal shift.</p>
Quality Housing	<p>Some policies and objectives that promote intensification and consolidation of the city, with mixed use sustainable neighbourhoods will all benefit both air and noise quality in the city.</p> <p>Majority of policies found to have insignificant impacts on air and noise.</p>
City Economy and Enterprise	<p>Majority of policies and objective were found to have insignificant impact on noise and/or air.</p> <p>Policies promoting quality of place, clean green environment would have beneficial impacts on both air and noise.</p>
Retailing	Overall insignificant impacts on noise and air.
Movement and Transport	<p>Movement and transport policies and objectives were found to have largely significant beneficial impacts with a small minority of policies having insignificant impacts on air quality and noise.</p> <p>Some objectives that promote road improvement schemes and bridges could have short-term impacts on noise during construction works.</p> <p>The policy to promote and facilitate the development of the Metro, Dart, Underground, etc., could again have impacts on noise and air quality during construction works.</p>
Sustainable Environmental Infrastructure	<p>Many policies and objectives having a largely significant beneficial impact with regards to control of noise and maintaining air quality in particular.</p> <p>The remaining policies having largely insignificant impacts on noise.</p>

Table 8.5 (ctd): Summary of Impacts of the Dublin City Development Plan 2016– 2022 on Air and Noise

Development Plan Policies	Summary of Significant Impacts on Air
Open Space and Recreation – Green Infrastructure	Overall significant beneficial impacts with some insignificant impacts on air quality and noise.
Culture and Heritage	Overall largely insignificant impacts on noise and air quality.
Sustainable Communities and Neighbourhoods	Overall largely insignificant impacts on noise and air quality.
Land Use Zoning	Some policies and objectives were found to have significant beneficial impacts with some insignificant impacts on air quality and noise.

8.2.4 Water

The Plan places emphasis on intensification, higher density, population growth, economic growth and increase in development over the lifetime of the plan and beyond. A potentially significant adverse impact of the Plan on water is the potential deterioration of waterbodies. Dublin region’s wastewater treatment plant at Ringsend is currently at capacity. Without the provision of upgraded and new wastewater infrastructure, the city’s ability to absorb additional population, economic growth and development is seriously restricted.

The expansion and upgrading of the Ringsend Wastewater Treatment Plan is an urgent priority for Irish Water. It is intended to upgrade, expand the treatment works to a capacity of c. 2.1 million PE from 1.64 million PE. The Greater Dublin Strategic Drainage Study has identified the need for the Greater Dublin Regional Wastewater Treatment Plant, marine outfall and orbital sewer in north Co. Dublin to protect the environment and secure the future economic, commercial, industrial and residential needs of the Greater Dublin Area after 2022.

Furthermore, supply and demand for drinking water in the Dublin region is finely balanced and this will remain the case in

the short to medium-term. With increased population and growth in the city and region’s activities it will be necessary to identify a new water source supply.

A policy has been put into the plan to ensure that development is permitted in tandem with available water supply and wastewater and to manage development, so that new schemes are permitted only where adequate capacity or resources exists or will become available within the life of a planning permission.

Apart from the wastewater and issues of water supply referred to above, the policies have been found to have likely significant beneficial impacts on water in the city as the provision of upgraded and new wastewater infrastructure, greening the landscape, protecting and improving biodiversity and areas of environmental importance, improving the character of watercourses and water quality, including groundwater resources. Policies and objectives for flood management will also improve water quality in the city.

See **Table 8.6** below for a summary of potential impacts of the development plan on Water.

Table 8.6: Summary of Impacts of the Dublin City Development Plan 2016–2022 on Water

Development Plan Policies	Summary of Significant Impacts on Water
Vision and Core Strategy	Mostly insignificant impacts with a potential significant adverse impact, as a result of policies to promote the growth of and consolidate the city, on water quality due to current limitations on the wastewater treatment capacity.
Addressing Climate Change	Mostly insignificant impacts. Policies to address flooding issues and improving the flood defences will have positive impacts on water.
Shape and Structure of the City	Mostly insignificant impacts with potential significant adverse impact on some policies which promote the growth of and consolidation of the city, on water quality due to current limitations on the wastewater treatment capacity. Some significant adverse impacts on water supply and distribution networks due to the water supply constraints in the longer term.
Quality Housing	Mostly insignificant impacts with potential significant adverse impact on some policies which promote more housing, including the growth of and consolidation of the city, on water quality due to current limitations on the wastewater treatment capacity. Some significant adverse impacts on water supply and distribution networks due to the water supply constraints in the longer-term.
City Economy and Enterprise	Mostly insignificant impacts with potential significant adverse impact on some policies which promote economic growth the city, on water quality due to current limitations on the wastewater treatment capacity. Some significant adverse impacts on water supply and distribution networks due to the water supply constraints in the longer-term.
Retailing	Mostly insignificant impacts with potential significant adverse impact on some policies which promote development of new district centres and growth, on water quality due to current limitations on the wastewater treatment capacity. Some significant adverse impacts on water supply and distribution networks due to the water supply constraints in the longer-term.
Movement and Transport	Mostly insignificant impacts with potential significant adverse impact on some policies which promote development of new district centres and growth, on water quality due to current limitations on the wastewater treatment capacity. Some significant adverse impacts on water supply and distribution networks due to the water supply constraints in the longer-term.
Sustainable Environmental Infrastructure	Many policies and objectives found to have significant beneficial impacts on water with some having Insignificant impact on, or no relationship with, water.
Open Space and Recreation Green Infrastructure	Many policies and objectives found to have significant beneficial impacts on water with some having Insignificant impact on, or no relationship with, water.
Culture and Heritage	Insignificant impacts overall.
Sustainable Communities and Neighbourhoods	Insignificant impacts overall.
Land Use Zoning	Mostly insignificant impacts with potential significant adverse impact on some policies which promote development of new district centres and growth, on water quality due to current limitations on the wastewater treatment capacity. Some significant adverse impacts on water supply and distribution networks due to the water supply constraints in the longer-term.

8.2.5 Material Assets (transport and waste management)

Overall the plan will have significant beneficial impacts on transport in the city. The need for a greater modal shift from private car to more sustainable forms of transport is emphasised throughout the plan. The Plan’s policies and objectives promote a mixed use, compact format of development in city which makes best use of the scarce land resource in the city.

The plan will also serve to have significant beneficial impacts on waste management as the policies of the Plan are focused on delivering sustainable infrastructure, including for waste management, as well supporting the principles of good waste management, to prevent and minimise waste, to develop biological treatment, encourage and support material sorting and recycling and support the provision of waste to energy.

All the above initiatives in the Plan will serve to have only significant beneficial impacts on material assets of the environment.

See **Table 8.7** below for a summary of potential impacts of the Plan on material assets.

Table 8.7: Summary of Impacts of the Dublin City Development Plan 2016–2022 on Material Assets

Development Plan Policies	Summary of Significant Impacts on Material Assets
Vision and Core Strategy	Many policies and objectives found to have significant beneficial impacts on material assets with some having Insignificant Impact on, or no relationship on material assets.
Addressing Climate Change	Many policies and objectives found to have significant beneficial Impacts on material assets with some having Insignificant Impact on, or no relationship on material assets..
Shape and Structure of the City	<p>Some polices/objectives have significant beneficial impacts as the policies promote mixed-use, sustainable communities served by good transportation linkages, with social and other supporting facilities available at the neighbourhood level which reduces the need to travel; other policies having mostly Insignificant Impacts on Transport.</p> <p>Overall insignificant impacts on waste management.</p> <p>No significant adverse Impacts found on either transport or waste management.</p>
Quality Housing	<p>Some polices/objectives have significant beneficial impacts as the policies promote mixed use, sustainable communities served by good transportation linkages, with social and other supporting facilities available at the neighbourhood level which reduces the need to travel; other policies having mostly insignificant impacts on transport.</p> <p>Overall insignificant Impacts on waste management.</p> <p>No significant adverse impacts found on either transport or waste management.</p>

Table 8.7 (ctd): Summary of Impacts of the Dublin City Development Plan 2016–2022 on Material Assets

Development Plan Policies	Summary of Significant Impacts on Material Assets
City Economy and Enterprise	<p>Some polices/objectives have significant beneficial impacts as the policies promote mixed use, sustainable communities served by good transportation linkages, with social and other supporting facilities available at the neighbourhood level which reduces the need to travel; other policies having mostly insignificant impacts on material assets.</p> <p>Overall insignificant impacts on waste management.</p> <p>No significant adverse impacts found on either transport or waste management.</p>
Retailing	<p>Some polices/objectives have beneficial impacts as while other policies having mostly insignificant impacts on material assets.</p> <p>Overall insignificant impacts on waste management.</p> <p>No significant adverse impacts found on either transport or waste management</p>
Movement and Transport	<p>Transport and movement policy having overall significant beneficial impacts on transport.</p> <p>Overall insignificant impacts on waste management.</p> <p>No significant adverse impacts found on either transport or waste management.</p>
Sustainable Environmental Infrastructure	<p>Infrastructure policies having significant beneficial impacts on waste management and having overall insignificant impacts on Transport.</p>
Open Space and Recreation Green Infrastructure	<p>No significant adverse impacts found on either transport or waste management.</p>
Culture and Heritage	<p>Insignificant impacts overall.</p>
Sustainable Communities and Neighbourhoods	<p>Mainly insignificant impacts on transport coupled with some polices having significant beneficial impacts as the policies promote mixed use, sustainable communities served by good transportation linkages, with social and other supporting facilities available at the neighbourhood level which reduces the need to travel.</p> <p>Overall insignificant impacts on waste management.</p>
Land Use Zoning	<p>The zoning chapter was found to have significant beneficial impacts on material assets.</p>

8.2.6 Cultural Heritage (including architectural and archaeological heritage)

Overall the impacts of the Plan was found to have potential significant beneficial impacts on the cultural heritage of the city due to the emphasis placed on recognising and valuing the city’s heritage, including streets, squares, civic spaces, etc., as a unique resource which forms the basis of Dublin city’s cultural tourism attractions. Connectivity and legibility in the historic core of the city is encouraged in order to increase the attractiveness and awareness of the built heritage for those on foot or cycling. The strategy of the Plan also includes, the enhancement of the city as a world-class tourist destination increasing the attractiveness of the city to overseas visitors as well as the existing population of the city and the country.

There is a potential unknown impact as a result of policy promoting significant residential accommodation on the upper floors of premises which may have an

adverse impact on the integrity of the building; however, the impact is also potentially beneficial as it may result in bringing underused buildings of architectural merit back into use. Overall the impact is not considered significant as the integrity of the building will be protected as a result of counterbalancing policies in the plan which ensure the protection of historic structures, their curtilage and setting from any works that would cause loss or damage to their special character.

A further potential unknown impact on archaeology could result with the construction of the DART, Underground and Metro. However, this will be subjected to a separate environmental assessment at project level. Therefore, the potential impact of this project plan is not considered significant.

See **Table 8.8** below for a summary of potential impacts of the development plan on cultural heritage.

Table 8.8: Summary of Impacts of the Dublin City Development Plan 2016–2022 on Cultural Heritage

Development Plan Policies	Summary of Significant Impacts on Cultural Heritage
Vision and Core Strategy	Insignificant impacts overall.
Addressing Climate Change	Insignificant impacts overall.
Shape and Structure of the City	Some policies/objectives have significant beneficial impacts as the policies promote enhancing the city's character, revitalising the Georgian squares, promoting a variety of cultural events in the city, protecting the skyline of the inner city, promoting understanding of the city's historical architecture.
Quality Housing	<p>Some policies having potential significant beneficial impact which discourage the demolition of habitable housing, and policies to reintroduce residential into the historic areas of the city which will bring life back into the city.</p> <p>Majority of policies having insignificant impacts.</p> <p>Unknown impact as strategy promotes significant residential accommodation on the upper floors of premises which may have a negative impact on the integrity of the building; however, it is also potential positive as it may result in bringing underused buildings of architectural merit back into use.</p>
City Economy and Enterprise	Mainly insignificant impacts on, or no relationship with, cultural heritage.
Retailing	Mainly insignificant impacts on, or no relationship with, cultural heritage. One positive objective which promotes the ongoing implementation of the City Markets Projects.
Movement and Transport	Mostly found to have insignificant impact on, or no relationship with cultural heritage.
Sustainable Environmental Infrastructure	Mostly found to have insignificant impact on, or no relationship with cultural heritage.
Open Space and Recreation Green Infrastructure	Mostly found to have insignificant impact on, or no relationship with cultural heritage.
Culture and Heritage	Most policies/objectives have significant beneficial impacts on cultural heritage.
Sustainable Communities and Neighbourhoods	Mostly insignificant impacts with some policies have a beneficial impact on culture.
Land Use Zoning	Mostly insignificant impacts with some zoning changes have significant positive impacts on cultural heritage. The changes to the Z8 zoning sets out comprehensive series of recommendations to revitalise the Georgian areas.

8.2.7 Landscape and Soils

The development plan will serve to have potential significant beneficial impacts overall on landscape and soils of the city. The plan is devised on a strategy of integration of landuse and transport integration with the objective of achieving an integrated and connected city allowing for the protection of greenfield sites on the fringes of the urban area. This strategy actively encourages the reuse of brownfield sites in the significantly less environmentally sensitive urban areas and significantly lessens pressure for development on greenfield lands.

Policies promoting significant regeneration, redevelopment of areas and promotion of taller buildings found to have potential significant adverse impacts on elements of the city’s natural landscape.

See **Table 8.9** below for a summary of potential impacts of the development plan on landscape and soils.

Table 8.9: Summary of Impacts of the Dublin City Development Plan 2016–2022 on Cultural Heritage

Development Plan Policies	Summary of Significant Impacts on Landscape and Soils
Vision and Core Strategy	Insignificant impacts overall.
Addressing Climate Change	Insignificant impacts overall.
Shape and Structure of the City	<p>Potential for significant adverse impacts on elements of the city’s natural landscape as a result of strategy to promote significant regeneration, redevelopment of areas and promotion of taller buildings.</p> <p>Mostly having significant beneficial impacts as a result of policies to consolidate the city and intensify development in areas of the city well connected by public transport thereby avoiding greenfield sites and reusing brownfield sites.</p>
Quality Housing	Majority of policies having insignificant impacts.
City Economy and Enterprise	Mainly insignificant impacts on, or no relationship.
Retailing	Mostly insignificant impacts with some polices having significant beneficial impacts on the architectural heritage in particular.
Movement and Transport	Mostly found to have insignificant impact.
Sustainable Environmental Infrastructure	Insignificant impacts overall.
Open Space and Recreation Green Infrastructure	Mostly insignificant impacts.
Culture and Heritage	Most polices/objectives have significant beneficial impacts on cultural heritage.
Sustainable Communities and Neighbourhoods	Mostly insignificant impacts with some polices have a beneficial impact on culture.
Land Use Zoning	Majority of policies having insignificant impacts.

From the assessment carried out it has been found that the implementation of the Plan will serve to have positive impacts overall on the environment.

However, as detailed in **Tables 8.2 to 8.9** above, the environmental assessment has also identified some policies, when assessed in isolation, that have the potential to have significant adverse impacts on some of the environmental receptors unless mitigated against. **Section 9** sets out the proposed mitigation procedures and measures.

8.3 Cumulative Impacts

Cumulative effects can be defined as ‘the net result of environmental impact from a number of projects and activities. With regard to Development Plans, cumulative effects can occur from combined impacts on policies and proposals on specific areas or sensitive receptors.

There are two types of potential cumulative impacts:

- a. Potential intra-plan cumulative effects: these would arise from the interactions between different types of potential environmental effects resulting from a plan or programme etc. The sensitivity mapping as set out in section 4.21.1 indicates the level of vulnerability. It is possible that future development may conflict with these cumulative environmental sensitivities and lead to the deterioration in environmental integrity.
- b. Potential inter-plan cumulative effects, those arising when the effects of the implementation of one plan occur in combination with those of another plan/programme, etc.

In Chapter 09 under mitigation, some of the effects that may arise as a result of implementing the Plan have been mitigated to an extent and only residual adverse effects likely to occur as a result of implementing the Plan are those which are identified in Section 8.4.

The SEA undertaken for the Plan has taken account of the Dublin City Council's obligation to comply with all environmental legislation and align with and cumulatively contribute towards in combination with other uses and bodies and their plans, etc.

The assessment of the likely inter-plan cumulative effects requires knowledge of the likely effects of all plans/development under construction. The assessment is limited in this instance as there has been limited assessment of the likely types of development provided for by other policies, plans and programmes that could occur in combination with the implementation of the Plan.

Taking into account available information, cumulative effects to be considered include those resulting from the Plan, other development Plans (South Dublin, Dún Laoghaire-Rathdown, and Fingal County Councils) and sectoral plans (Eastern and South Eastern River Basin Management Plans, Grid 25, and associated implementation programmes, Irish Waters proposed Capital Investment Plan 2014–2016, etc.)

Potential Cumulative effects may include:

- Potential cumulative effects arising from linear development, including coastal areas
- Effects on the use of water and wastewater treatment capacity arising from new developments

- Effects on both ground and surface water quality
- Effect on flooding as a result on building on Greenfield sites, etc., or obstruction of flood paths in or adjacent to the DCC border
- Effects on habitat networks as a result of habitat fragmentation

The National Spatial Strategy 2002–2020, the National Development Plan 2007–2013 and the Regional Planning Guidelines for the Greater Dublin Area 2010–2022 set the planning framework within which the Dublin City Development Plan 2016–2022 has been prepared with the objective of achieving an optimal balance of social, economic and physical development across the City. The effects of this higher level Strategy and Plan are considered insofar as they inform the Development Plan. Subsidiary plans and projects are subject to separate assessment procedures in accordance with all applicable Regulations and Directives.

A variety of issues covered by the plan provisions are Regional Issues which are considered at Regional Assembly level, in the Regional Planning Guidelines for the Greater Dublin Area 2010–2022 and by Planning Authorities across the Region. The SEA for the Regional Planning Guidelines for the Greater Dublin Areas 2010–2022 makes particular reference to the potential cumulative effects in association with other relevant plans and programmes within the greater Dublin Areas, including the proposed 2030 Vision for Greater Dublin Transport, the Eastern Flood Risk Assessment and Management Studies, the Water Supply Project and the relevant River Basin Management Plans.

It is acknowledged that there could be potential ex-situ impacts of a new water

source from the River Shannon, but it should be noted that a separate SEA/EIA will be undertaken for any new water source that will deal with direct and indirect impacts. This will be outside DCC administrative boundary. Irish Water is responsible for all public water services involving the supply of drinking water.

The following Plan Provisions, in particular, have the potential to contribute towards potential cumulative/in-combination adverse environmental effects. These effects would be mitigated by both measures that have been integrated into the Plan (see Section 9) and by measures arising from lower tier assessments.

Some of the main policies, along with their accompanying objectives, with a zone of influence outside the plan area are those relating to:

- Chapter 01 and 2 Strategic Context and Vision and Core Strategy
- Land Use Zoning Objectives
- Supporting the RPGs, NSS, National Planning Framework, Transport Strategy for the GDA, Smarter Travel, DMURS, National Cycling Policy, etc. (MT1, MT6, MT7)
- Water and Wastewater Treatment (SI1, SI2)
- Flooding and Droughts (CC5, SI8, SI14, SI15, SI16, SI10)
- Water Bodies (SI4, SI5, GI15, GI15,GI16, GI17, GI19,GI20, GI21)
- Catchment Based Flood Risk Management Plans (SI9)
- Retail Strategy (RD1)
- New District Centre (RD25)
- Supply of zoned land (QH5)

- Cycleways and paths (MT5, MT7)
- Developing GI Network (GI1, GI3)
- Have regard to Regional Planning Guidelines and make provision for scale of populations growth and housing allocations (QH2)
- Climate (CC1, CC, CC3, CC5)
- The Region (CEE1, CEE4, CEE9)

8.4 Potential Residual Adverse Effects

Environmental Component	Residual Effect
Population and Human Health	None
Biodiversity, Flora and Fauna	Loss of biodiversity with regard to European Sites and Annexed habitats and species and loss of biodiversity to designated sites, including wildlife sties and listed species.
Water	Potential significant adverse impact on quality and status of water bodies. Limitations of Wastewater Treatment Facility at Ringsend which could lead to deterioration of water based habitats and species and to the quality of water. Failure to comply with the drinking water regulations and to provide new development with a clean water supply.
Air and Climatic Factors	Increase in the number of flood events due to increased development pressure on the land, and hard surfacing areas of the city. Uncertainty with regard to extreme flood events. Failure to tackle climate change and emissions from transport and issues regarding climate change.
Material Assets	Increase in waste levels.
Architectural Heritage	Effects on entries to the Record of Protected Structures.
Archaeological Heritage	Effects on entries to the record of Projected Monuments and Places and other archaeological heritage.
Landscape	Potential adverse impacts arising from visual impacts on the landscape.

09

Mitigation

Chapter 09 – Mitigation

9.1 Introduction

This section describes measures to prevent, reduce and as fully as possible offset any potential significant adverse environmental effects of implementing the Dublin City Development Plan 2016–2022.

As described and detailed in Section 8 and Appendix A, potential significant adverse impacts of implementing the Dublin City Development Plan 2016–2022 arise as a result of policies to facilitate additional population and economic growth and development, increasing densities and generally facilitating intensification of the city, promoting increased access to recreational areas, opening up private recreational areas and promoting taller buildings in some locations of the city. While these policies are fully in line with national and regional policy to consolidate and ensure a more compact city with greater intensity of uses and to ensure that the city’s role as the economic engine of the state is strengthened, there is potential for significant adverse impacts on the receiving environment unless mitigated against. Mitigation measures are the measures to prevent, reduce and as fully as possible offset any significant adverse environmental effects as a result of implementing the plan.

Dublin City Council placed sustainability as the overarching theme from the outset of the preparation of the Plan. The creation of a compact, green and connected city made up of sustainable neighbourhoods informed the preparation of the core strategy and the policies and objectives of the development plan from the outset. The plan also contains

planning policies for a sustainable city and region which set out a new initiative to underpin the sustainable approach taken in the plan.

Policies with sustainability at their core allow them to act as mitigation measures to offset any potential adverse impacts on the environment as a result of implementing the development plan. Mitigation in the form of policies serves to formalise the mitigation measures and fully integrates them into the Plan process and during the implementation phase of the Plan.

9.2 Mitigation

As set out in Section 8 and detailed in Appendix A some policies will serve to have potential adverse impacts on some environmental receptors, particularly water, landscape and biodiversity, flora and fauna. The mitigation measures are set out for each of the affected environmental receptors below.

9.2.1 Mitigation through consideration of alternatives

A number of alternatives were considered at an early stage in the process and evaluated for their likely significant environmental effects (see section X). Three options were considered:

- a. Targeted growth around existing identified growth centers
- b. Alternative 2 – Market-led Growth
- c. Selected concentration of growth targeted on existing SDRA/KDC/SDZ areas – elements of a phased approach to the development of land.

The environmental baseline data and the Strategic Environmental Objectives were used in order to predict and evaluate the environmental effects of implementing the alternatives and communication of the findings were made to the Plan team who made an informed decision as to what option was to emerge as the preferred option.

9.2.2 Integration of individual SEA, AA and SFRA provisions into the Plan

As part of the Screening process for SEA and AA a number of suggestions were made to the Development Plan Team to amend or insert a number of text changes through the SEA, AA and SFRA processes. The measures generally benefit multiple environmental components, i.e., protection of biodiversity, flora and fauna, minimisation of flood risk, protection of the landscape, for example.

Table 9.1: Suggestions made to the Development Plan team during the Screening Stage

<p>Chapter 04 – Shape and Structure of the City SC3: To develop a sustainable network of safe, clean, attractive pedestrian routes, lanes and cycleways in order to make the city more coherent and navigable.</p>	<p>AA Comments: The word sustainable should be inserted</p>
<p>SC29: To discourage dereliction and to promote the appropriate redevelopment of vacant and brownfield lands, in line with environmental surveys including flora and fauna, and to prioritise the redevelopment of sites identified in Dublin Inner City Vacant Land Study 2015.</p>	<p>SEA Comments: Policy should be carried out in line with Environmental surveys, including flora and fauna. Invasive species</p>
<p>Chapter 05 – Quality Housing QH8: To promote the development of vacant or underutilised infill sites, in line with environmental surveys including flora and fauna, and to favourably consider higher density proposals which respect the design of the surrounding development and the character of the area.</p>	<p>SEA Comments: Policy should be carried out in line with Environmental surveys, including flora and fauna. Should consider inclusion of reference to within the canals</p>
<p>Chapter 07 – Retailing RD2: (M274) To require that proposed retail developments for large scale or sensitive sites in line with environmental requirements, are accompanied by a retail design brief guided by the key principles contained in the ‘Retail Design Manual – DECLG, 2012’. www.environ.ie/en/Publications</p>	<p>SEA comments: Policy should include reference to in line with environmental requirements</p>

Table 9.1 (ctd): Suggestions made to the Development Plan Team during the Screening Stage

<p>Chapter 08 – Movement and Transport MTO31: To initiate and/or implement the following road improvement schemes and bridges within the six year period of the development plan, subject to the availability of funding, and environmental requirements</p> <p><u>Roads</u></p> <ul style="list-style-type: none"> • River Road • Richmond Road • Malahide Road/R107, including North Fringe Improvements) • Blackhorse Avenue (commenced) • Clonshaugh Road Industrial Estate • Ballymun (improved town centre linkage) • Kilmainham/South Circular Road • Link from Military Road to Conyngham Road • East Wall Road/Sheriff Street to North quays • Cappagh Road <p><u>Bridges</u></p> <ul style="list-style-type: none"> • Dodder Bridge • Liffey Valley Park Pedestrian/cycle bridge • Cycle/pedestrian bridges that emerge as part of the evolving Strategic Cycle Network and Strategic Green Infrastructure Network. • Newcomen Bridge (upgrading for pedestrian and cyclists use) • Three new bridges proposed as part of the North Lotts and Grand Canal Dock SDZ. 	<p>Objective should include reference to include 'environmental requirements in text</p>
<p>Chapter 09 Sustainable Environmental Infrastructure SI4: To promote & maintain the achievement of at least good status in all water bodies in the City</p>	<p>SEA: Policy should refer to 'maintain' good status also</p>
<p>SI8: To mitigate the effects of floods and droughts, subject to Environmental Assessment</p>	<p>AA Comment: Policy should have regard to AA screening</p>
<p>GI019: To maintain beaches at Dollymount, Sandymount, Merrion and Poolbeg/Shelly Banks to a high standard, and to develop their recreational potential as a seaside amenity, in order to bring them to 'Blue Flag', standard, subject to Article 6 Assessment of the Habitats Directive</p>	<p>AA Objective should have regard to Article 6 Assessment</p>
<p>GI2: That any plan/project, either individually or in combination Other plans or projects that has the potential to give rise to significant effect on the integrity of any Natura-2000 European Site(s) shall be subject to an appropriate assessment in accordance with Article 6(3) and 6(4) of the EU Habitats Directives.</p>	<p>AA Comment: Any reference to Natura 2000 site should read European Site This should be amended throughout</p>

Table 9.1 (ctd): Suggestions made to the Development Plan Team during the Screening Stage

GI9: To incorporate open space into the green infrastructure network for the city providing a multi-functional role including urban drainage, flood management , biodiversity, outdoor recreation and carbon absorption	SEA: Reference should be amended to insertion of word flood management on foot of comments from JBA consulting.(SFRA)
GI18: To liaise with relevant state agencies responsible for the waterways, including Waterways Ireland, Eastern Regional Fisheries Boards Inland Fisheries Ireland, the Environmental Protection Agency and Dublin Port Company	SEA: This should be amended to read Inland Fisheries Ireland not Easter Regional Fisheries. Also include reference to EPA
GI21. To support initiatives to reduce marine pollution in Dublin Bay In partnership with other organisations and to raise awareness by Bay users and the general public, and also to have regard to the Marine Strategy Framework Directive (2008/56/EC)	SEA: To have regard to the Marine Strategy Framework Directive, 2008
GI23: To protect flora, fauna and habitats, which have been identified by the Articles 10 and 12 of the Habitats Directive, Birds Directive, Wildlife Act 1976 (as amended), the Flora Protection rder (S.I. no. 84 of 1999), the Birds & Natural Habitats Regulations, 2010 , and the European Communities (Natural Habitats) Regulations 1997 (S.I. no. 94 of 1997)	SEA: Should be amended to include Birds and Natural Habitats Regulations 2010, Article 10 & 12 of the Habitats Directive
GI24: To conserve and manage all Natural Heritage Areas, Special Areas of Conservation and Special Protection Areas designated, or proposed to be designated, by the Department of Environment, Heritage and Local Government. Department of Arts, Heritage and the Gaeltacht	SEA: Reference should be amended to Department of Arts, Heritage and the Gaeltacht
Chapter 12 – Sustainable Communities and Neighbourhoods SN13: To facilitate multi-campus style school arrangements where appropriate, in close proximity to residential neighbourhoods and transportation routes , and to promote an urban typology of school building design sustainable in a city context and which responds to the local character or streetscape and reflects the civic importance of a school to a local community.	SEA Comments: Suggest that this reads in proximity to residential neighbourhoods and main transport routes

9.2.3 Integration of Environmental Considerations into the Plan

Potential adverse impacts could arise from a number of policies and objectives in the plan which promotes consolidation and growth of the City and resultant increase in population, if unmitigated. This could potentially lead to adverse impacts upon the status of water bodies, and also failure to provide adequate and appropriate waste water treatment and also failure to comply with drinking regulations and serve the new development with adequate clean drinking water.

From January 2014 Irish Water became responsible for all public water services, involving the supply of drinking water and the collection, treatment and disposal of wastewater.

Irish Water is now responsible for all public water services, involving the supply of drinking water and the collection, treatment and disposal of wastewater. The expansion and upgrading of the Ringsend Wastewater Treatment Plan is an urgent priority for Irish Water and it is intended to upgrade, expand the treatment works to a capacity of c. 2.1 million PE from 1.64 million PE. The Greater Dublin Strategic Drainage Study has

identified the need for the Greater Dublin Regional Wastewater Treatment Plant, Marine Outfall and orbital sewer in north county Dublin to protect the environment and secure the future economic, commercial, industrial and residential needs of the Greater Dublin Area after 2022.

Irish Water recognises the need for a new water source for the Eastern and Midlands Region of the Country and the Project Need Report (2015) states that it is expected that the projected demand for water in Dublin alone will increase by over 50% by 2050. Water Conservation (leakage and demand management) is a cost effective and sustainable way to reduce demand for water. Irish Water's Water Services Strategic Plan aims to reduce current leakage rates nationally from 49% to less than 38% by the end of 2021 and to an economic level of leakage by 2040, whilst the Dublin City Development Plan will promote demand management measures.

Dublin City Council will work closely and support Irish Water to provide and maintain an adequate public water supply and waste water infrastructure network throughout the city for the plan period.

Potential significant impacts could also arise on biodiversity of some of the policies and objectives which promote new walkways/ cycleways could result in the potential loss of biodiversity with regard to European 2000 sites and annexed habitats and species

and also loss of biodiversity with regard to designated sites, including wildlife sites and listed species. Other significant impacts could result in loss of biodiversity with regard to ecological connectivity, stepping stones etc, and damage to the hydrological and ecological function of soil resources.

Short term impacts could arise from construction works from police and objectives promoting increase in population, and growth, if unmitigated.

Other potential impacts of development could lead to an increase in flooding events, as a result of hardsurfacing of landscape with buildings etc and impermeable surfaces.

Increased consolidation, higher densities, greater amounts of development, and higher buildings in some locations of the city has potential to have significant adverse impacts on the natural landscape and biodiversity.

Higher buildings in some locations may have negatively impact on important views and prospects that form an important element of the city landscape. A number of overarching policies/ objectives have been included in the Development plan as mitigation.

Table 9.2: Summary: Integration of Environmental Considerations into the Plan

Potential Significant Impacts if unmitigated	Environmental considerations that have been integrated into the Plan
<p>1. Increase in the number of flood events due to increased development pressure on the land, and hard surfacing areas of the city</p>	<p>CC1: Policy to prioritise measures to address climate change CC5: Policy to address flood risk at strategic level through the process of strategic flood risk assessment, and through improvements to the city's flood defences SI8: Policy to mitigate the effects of floods and droughts SI9: Policy to develop catchment based Flood Risk Management Plans for rivers, coastlines and estuaries. SI10: Policy to have regard to the Flood Risk Management Guidelines SI11: Policy to protect integrity of Flood Defence Infrastructure SI12: Policy to comply with the Strategic Flood Risk Assessment SI13: Policy regarding Basements and Flooding SI14: Policy to protect coastline from flooding SI15: Policy to minimise the risk of pluvial flooding SI16: Policy to minimise flood risk from all other sources SI17: Policy to require an environmental assessment of all proposed flood protection or flood alleviation works SI18: Policy regarding use of SUDS GI2: Policy requiring AA screening for plans/projects GI4: Policy regarding GI and flooding GI9: Policy regarding multifunctional role of GI, including urban drainage and flood management Objectives (SIO8, SIO9, SIO10, SIO11, SIO12, SIO13, SIO14, GIO28,GIO29)</p>
<p>2. Failure to tackle climate change and emissions from transport and issues regarding climate change</p>	<p>CC1: Policy address climate change CC2: Policy to mitigate the impacts of climate change CC3: Policy to promote energy efficiency CC5: Policy to address flood risk at strategic level SI8: Policy to mitigate the effects of floods and droughts GI9: Policy to integrate open space into the GI network for the city, providing multifunctional role including drainage, flood management, biodiversity, outdoor recreation, and carbon absorption MT2: Policy to promote modal shift from private car to more sustainable transport modes</p>

Table 9.2 (ctd): Summary: Integration of Environmental Considerations into the Plan

Potential Significant Impacts if unmitigated	Environmental considerations that have been integrated into the Plan
<p>3. Loss of biodiversity with regard to European Sites and Annexed habitats and species and loss of biodiversity to designated sites including wildlife sties and listed species</p>	<p>GI1: Policy to develop a green infrastructure network through the city thereby interconnecting strategic natural and semi natural areas, etc.</p> <p>GI2: Policy requiring AA screening for Plans and Projects.</p> <p>GI3: Policy to develop linear parks, particularly along waterways.</p> <p>GI6: Policy to support and implement the objectives of the National Landscape Strategy</p> <p>GI7: Policy to protect landscapes including existing green spaces</p> <p>GI9: Policy to integrate open space into the GI network for the city, providing multifunctional role including drainage, flood management, biodiversity, outdoor recreation and carbon absorption</p> <p>GI10: Policy to protect/enhance public open spaces</p> <p>GI11: Policy to seek provision of additional spaces in areas deficient such as pocket parks or development of institutional land</p> <p>GI14: Promote development of soft landscaping and SUDS</p> <p>GI15: Policy to protect character of watercourses in the city</p> <p>GI16: Policy to improve the natural character and ecological value of all rivers</p> <p>GI17: Policy to develop sustainable coastal, estuarine, canal and riverine recreational amenities</p> <p>GI19: Policy to promote coordinated approach to the management of Dublin Bay</p> <p>GI21: Policy to reduce marine pollution in Dublin Bay</p> <p>GI23: Policy to protect flora, fauna and habitats,</p> <p>GI24: Policy to conserve and manage all NHAs, SACs and SPAs,</p> <p>GI25: Policy regarding habitat creation/maintenance and facilitate biodiversity</p> <p>GI26: Policy regarding non designated areas of ecological importance</p> <p>GI28: Policy to support implementation of the Dublin City Tree Strategy</p> <p>GI29: Policy to adopt proactive approach to tree management</p> <p>GI30: Policy to encourage more tree planting</p>
<p>4. Short Term impacts as a result of construction work on noise and air quality in the city</p>	<p>SI24: Policy to monitor and improve air quality</p> <p>SI25: Policy to preserve and maintain air and noise quality Objectives (SIO20, SIO21, SIO22, SIO23, SIO24, SIO25, SIO26, SIO27, SIO28, SIO29)</p>
<p>5. Potential adverse impact on quality and status of water bodies.</p>	<p>SI4: Policy to promote and maintain good status in water bodies</p> <p>SI5: Policy regarding enhancement of aquatic ecosystems</p> <p>SI6: Policy to protect aquatic environment</p> <p>SI7: Policy to reduce pollution of groundwater</p> <p>GI15: Policy to maintain and improve character and of watercourses in the city</p> <p>GI16: Policy to protect the character and ecological value of all rivers within DCC</p> <p>GI19: To ensure co-ordinated approach to management of Dublin Bay.</p> <p>GI20: Policy for improvement of water quality, bathing facilities and other recreational opportunities in the coastal, estuarine and surface waters</p> <p>GI21: Policy to reduce marine pollution in Dublin Bay</p>
<p>5. Limitations of Wastewater Treatment Facility at Ringsend which could lead to deterioration of water based habitats and species and to the quality of water</p>	<p>SI1: Policy to support Irish Water: provision of high quality drinking water and waste water treatment facilities</p> <p>SI2: Policy to support Irish Water in upgrading of wastewater infrastructure and Greater Dublin Regional Wastewater Treatment Plant and Marine Outfall and orbital sewer</p> <p>SI3: Policy to ensure development is permitted in tandem with available water supply and wastewater treatment</p>

Table 9.2 (ctd): Summary: Integration of Environmental Considerations into the Plan

Potential Significant Impacts if unmitigated	Environmental considerations that have been integrated into the Plan
6. Failure to comply with the drinking water regulations and to provide new development with a clean water supply	SI1: Policy to support Irish Water: provision of high quality drinking water and waste water treatment facilities SI2: Policy to support Irish Water in upgrading of wastewater infrastructure and Greater Dublin Regional Wastewater Treatment Plant and Marine Outfall and orbital sewer SI3: Policy to ensure development is permitted in tandem with available water supply and wastewater treatment
7. Increase in waste levels	SI19: Policy to support good waste management SI20: Policy regarding material sorting/recycling SI21: Policy to minimise amount of waste SI22: Policy regarding polluter pays principle Objectives(SIO15, SIO16, SIO17, SIO18, SIO19)
8. Effects on entries to the record of Projected Monuments and Places and other archaeological heritage	CHC9: Policy to protect and preserve National Monuments CHC10: Objective to implement archaeological actions of Dublin City Heritage Plan 2002–2006, in light of the review 2012 CHC15: Policy to preserve historic elements of significance in the public realm
9. Effects on entries to the Record of Protected Structures	CHC1: Policy to seek the preservation of the built heritage of the city, etc. CHC2: Policy to ensure that the special interest of protected structures is protected CHC3: Policy to identify and protect exceptional buildings of late twentieth century CHC4: Policy To protect the special interest and character of Dublin's Conservation Areas CHC5: Policy to protect Protected Structures and preserve the character and the setting of Architectural Conservation Areas CHC6: Policy to ensure a sustainable future for historic and other buildings subject to heritage protection
10. Potential adverse impacts arising from visual impacts on the landscape	SC16: Policy to recognise Dublin as predominately low rise whilst also recognising the potential and need for taller buildings in a limited number of locations SC17: Policy to protect skyline of the inner city SC18: Policy regarding provision of tall buildings GI7: Policy to protect landscapes GI8: Policy regarding views and prospects in relation to landscape and natural heritage Objective GIO8: to undertake a views and prospects study to identify key views and prospects of the city Objective SCO4: to undertake a views and prospects study

9.4 Conclusion

In conclusion it is apparent from the above assessment that each section of the Plan includes mitigatory measures in the form of policies and objectives to offset any potential impacts on the environmental receptors. No additional mitigation measures were considered necessary in relation to any of the environmental receptors.

10

Monitoring

10.1 Introduction

This section sets out the proposed monitoring measures in accordance with Article 10 of the SEA Directive which requires that ‘significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen effects, and to be able to undertake appropriate remedial action’. A monitoring programme has been devised having regard to the existing monitoring systems in place and in use by Dublin City Council.

For the purposes of the Strategic Environmental Assessment (SEA) of the development plan, the SEA in-house team developed environmental protection objectives, targets and indicators early on in the SEA process. These are set out in Section 5 of this report. Monitoring of the indicators is essential in order to track the impacts of the development plan on the environment.

10.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures or trends and progress over time relating to Strategic Environmental Objectives identified in Section 4, and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions.

Table 9.1 sets out the Monitoring Programme, including the targets, indicators and department responsible for carrying out the monitoring. The Monitoring programmes may be updated to deal with specific environmental issues inducing unforeseen effects as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

10.3 Data Sources

Measurements for indicators generally come from existing monitoring sources such as those maintained by the Dublin City Council and other relevant authorities, e.g., the Environmental Protection Agency (EPA), the National Parks and Wildlife Service (NPWS) and the Central Statistics Office (CSO). The Development Management process in Dublin City Council will provide passive monitoring of various indicators and targets as applications come in. In the case where significant effects, including positive, cumulative or indirect impacts have the potential to occur, i.e, in the case of entries to the RMP or RPS or impact on ecological networks, e.g., as a result of undertaking of individual projects, such instances should be identified and recorded and should feed into the monitoring process.

10.4 Reporting and Responsibility

Dublin City Council will be responsible for monitoring and reporting on feedback. The City Council will prepare a standalone Monitoring Report of implementing the Plan, which will be prepared in advance of the review of the Plan.

Dublin City Council is responsible for the implementation of the SEA Monitoring Programme, including:

- Linking SEA monitoring output with the mid-term review of the Development Plan;
- Monitoring specific indicators and identifying any significant effects, including cumulative effects;
- Reviewing the effectiveness of monitoring/mitigation measures during the lifetime of the Plan; and
- Identifying any cumulative effects.

10.5 Thresholds at which corrective action will be taken

- The occurrence of flood events,
- Court cases taken by the DECLG regarding impacts upon archaeological heritage, including entries to the Record of Monuments and Places,
- Complaints received from statutory consultees regarding avoidable impacts resulting from development which is granted permission under the scheme,
- Boil Notices on drinking water and
- Fish Kills.

Table 10.1: Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Population and Human Health	To create a sustainable compact city and a high quality healthy safe environment in which to live, work and/or visit.	Sustainable densities achieved in new residential/ mixed use schemes	Average density of new residential development	Every 2 years	Planning and Property Development Department (PPDD)
		Increase the number of residential properties	Percentage increase of residential properties	Every 2 years	(PPDD)
		Improved access to community and recreational facilities	Percentage increase in the number of schools/ crèches/ community parks/sports facilities and primary health centres	Every 2 years	(PPDD)

Table 10.1 (ctd): Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Biodiversity, Flora and Fauna	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features.	Maintain the favourable conservation status of all habitats and species which are within designated sites protected under national and international legislation and also habitats and species outside of designated sites.	Number of developments granted planning permission within designated sites.	Every 2 years	(PPDD) Parks and Landscape Services
			Number of Natura Impact Statements submitted to Dublin City Council	Every 2 years	Parks and Landscape Services
			Percentage increase or decrease of bat and otter populations in Dublin City	Every 2 years	Parks and Landscape Services
		Deliver the objectives of the Dublin City Biodiversity Action Plan 2015–2020	Number of objectives/ policy actions delivered by the biodiversity plan	Every 2 years	Parks and Landscape Services
		Implementation of the actions from the green infrastructure strategy for Dublin City	Number of projects delivered by the green infrastructure strategy	Every 2 years	(PPDD) Parks and Landscape Services
			Totals of, or reduction in the quantum of greenfield lands; length of linked green corridors		(PPDD) Parks and Landscape Services
		Control and protect against the spread of noxious weeds and invasive species	Number of projects within the City that have identified noxious weeds and invasive species	Every 2 years	(PPDD) Parks and Landscape Services

Table 10.1 (ctd): Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		Achieve the objectives of the Tree Strategy and Canopy Survey for Dublin City	Percentage increase of tree planting within Dublin City	Every 2 years	(PPDD) Parks and Landscape Services
			Tree Canopy cover within the city area to contribute to carbon sequestration (no. of trees)	Every 2 years	Parks and Landscape Services
		Implementation of setback/ buffer zones of 10 m for development along watercourses	Number of planning applications adhering to the 10 m buffer zone setback	Every 2 years	(PPDD)
		Increased provision for soft landscaping in existing and new developments	Amount of open space provided in planning applications for Z10 and Z15 lands	Every 2 years	(PPDD)
Climatic Factors	Contribute to the mitigation of/ and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.	Maintain air quality status and meet value targets for named pollutants in line with Air Quality Framework Directives	Values of monitored pollutants in the air, including the levels of Nitrogen Oxides (NO _x) and Particulate matter (PM ₁₀) not breach regulation limits	Every 2 years	Roads and Traffic – Noise and Air Section
Air Quality	Minimise emissions of pollutants to air associated with development activities and maintain acoustic quality.	Decrease greenhouse gas emissions in line with national targets	Average energy consumption of new residential housing stock, tonnes of CO ₂ / year	Every 2 years	Energy Division

Table 10.1 (ctd): Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		Increase energy efficiency (reduce energy waste) from renewable energy sources in line with the National Energy Efficiency Action Plan	Number of objectives implemented from Dublin City Energy Strategy	Every 2 years	Energy Division
			Number of permitted developments that include district heating	Every 2 years	Energy Division
			Number of permitted developments incorporating solar renewables	Every 2 years	Energy Division
			Number of (social) housing units, public buildings and community centres connected to district and group heating systems	Every 2 years	Energy Division
		Produce noise maps for Dublin City and ensure they are updated	Number of zonings that conflict in relation to acoustic increases	Every 2 years	Roads and Traffic – Noise and Air Section
		Increase modal shift to public transport, walking and cycling	Percentage/ quantum of population travelling to work by public transport, walking and/or cycling.	Every 2 years	Roads and Traffic
		Compliance with the requirements of the Development Plan's Strategic Flood Risk Assessment	Percentage of planning applications compliant with the SFRA	Every 2 years	(PPDD) Environment and Engineering – Water Division

Table 10.1 (ctd): Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		Compliance with the OPW's Guidelines for Planning Authorities – The Planning System and Flood Risk Management	Percentage of planning applications incorporating flood risk assessment and conditions requiring appropriate flood resilient measures for new developments	Every 2 years	(PPDD) Environment and Engineering – Water Division
		Implement Sustainable Urban Drainage Systems in all new developments	Number of Sustainable Urban Drainage Systems implemented in new planning applications	Every 2 years	(PPDD) Environment and Engineering – Water Division
Water	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislation including the River Basin Management Plan of the Eastern River Basin District.	Achieve and maintain good status of all surface water bodies.	Improvement in Status of Water Body as per RBMP	Every 2 years	Environment and Engineering – Water Division
		All designated bathing waters to comply with the requirements of the Bathing Water Quality Regulations 2008 (S.I. 79 of 2008)	Bathing waters comply with requirements of Bathing Water Regulations	Every 2 years	Environment and Engineering – Water Division
		Identify and provide Surface Water pipelines as appropriate	Lengths of new Surface Water pipeline installed	Every 2 years	Environment and Engineering – Water Division

Table 10.1 (ctd): Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Material Assets	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population	Develop public transport, cycleways and road infrastructure to facilitate sustainable growth and travel patterns	Percentage change in commuting modal shift to sustainable travel modes	Every 2 years	Environment and Transportation
		Extend and improve the cycling and walking network	Number of new cycling and walking schemes implemented	Every 2 years	Environment and Transportation
		Comply with the Eastern Midlands Waste Management Plan and operate sustainable waste management practices	Quantum of residential and commercial waste reused and recycled	Every 2 years	Engineering – Waste Management
		Protect and enhance green infrastructure	Number of greenfield sites developed	Every 2 years	(PPDD) Parks and Landscape Services
Cultural Heritage	To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage	No loss or adverse impact on the fabric or setting of monuments on the Record of Monuments	Number of planning applications with archaeological conditions that were complied with	Every 2 years	(PPDD)

Table 10.1 (ctd): Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
		No loss of or adverse impact on the architectural heritage value or setting of protected structures and monuments	Loss of, or adverse impact on protected structures, architectural conservation areas or NIAH structures	Every 2 years	(PPDD) City Architects – Conservation
			Number of archaeological sites with archaeological conditions attached	Every 2 years	(PPDD) City Architects – Conservation
		No loss of or adverse impact on structures recorded on the National Inventory of Architectural Heritage	Number of protected structures put at risk or on the derelict sites register	Every 2 years	(PPDD) City Architects – Conservation
		Revision of the Dublin Heritage Plan 2002–2006, to ensure enhancement of key sites	Number of conservation plans implemented through the Dublin Heritage Plan	Every 2 years	(PPDD) City Architects – Conservation City Archaeologist
			Number of proposed plans and schemes screened/ assessed by the Conservation Officer for the city and City Archaeologist	Every 2 years	(PPDD) City Architects – Conservation City Archaeologist
			Number of Architectural Conservation Areas designated	Every 2 years	(PPDD) City Architects – Conservation

Table 10.1 (ctd): Selected Indicators, Targets and Monitoring Sources

Environmental Receptor	Environmental Protection Objective	Target	Indicator	Frequency of Reporting	Department Responsible
Landscape and Soils	To protect and where appropriate enhance the character, diversity and special qualities of Dublin city's landscapes and soils and Geological Features	Develop new areas of open space and increase number of trees	Number of new parks/ open spaces, change in area of the parks and number of trees planted	Every 2 years	(PPDD) Parks and Landscape Services
		Create a well-connected city landscape consisting of linear connections (e.g. river corridors and networks)	Length of existing and new linked landscape corridors	Every 2 years	(PPDD) Parks and Landscape Services
		Develop brownfield lands and vacant sites	Total area of brownfield lands and vacant sites developed	Every 2 years	(PPDD) Parks and Landscape Services

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Appendix

Table 1: Environmental Protection Objectives

Environmental Receptor	Environmental Protection Objectives
Population and Human Health (PH1)	To create a sustainable compact city and a high quality safe environment in which to live, work and/or visit.
Biodiversity/Flora and Fauna (BFF1)	To protect and where appropriate, enhance the diversity of habitats, species, ecosystems and geological features.
Climatic Factors (CF1)	To contribute to the mitigation of/and adaptation to climate change and implement requirements of Strategic Flood Risk assessment.
Air Quality and Noise (AQ1)	To minimise emissions of pollutants to air associated with development activities and maintain acoustic quality.
Water (W1)	To protect and where necessary improve the quality and management of watercourses and groundwater, in compliance with the requirements of all water and habitat based legislating including the River Basin Management Plan of the Eastern River Basin District.
Material Assets (MA1)	To make best use of Dublin city's infrastructure and material assets and to promote the sustainable development of new infrastructure to meet the needs of the city's population
Cultural Heritage (CH1)	To protect and where appropriate enhance the character, diversity and qualities of Dublin city's cultural, including architectural and archaeological, heritage.
Landscape (LS1)	To protect and where appropriate enhance the character, diversity and special qualities of Dublin city's landscapes and soils and geological features.

Table 2: Evaluation Criteria

Will the Implementation of the Alternative Serve to Have:	
A significant beneficial impact on the environmental receptor	+
A significant adverse impact on the environmental receptor	-
An uncertain impact on the environmental receptor	?
An insignificant impact or no relationship with the environmental receptor	0

Chapter 02 Vision and Core Strategy	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<ul style="list-style-type: none"> The core strategy of this Plan to achieve the vision in a manner that is consistent with the guidance, strategies and policies at national and regional level. In particular, the National Spatial Strategy 2002–2020 (NSS), the Regional Planning Guidelines for the Greater Dublin Area 2010–2022 (RPGs) and the Government’s Smarter Travel – A Sustainable Transport Future 2009–2020, all guide and direct the fundamentals of the City Council’s housing, settlement and retail strategies, which in turn are integrated into the overall development plan vision and core strategy for 2016–2022. The overall core strategy for Dublin city, and therefore the context of the 2016–2022 Plan, builds on the principles established in the previous Dublin City Development Plan 2011–2017. The core strategy has been informed by Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) and the Strategic Flood Risk Assessment, undertaken as parallel processed in tandem with each stage of the Plan. To deliver the Core Strategy the following mechanisms are used: Dublin City Council will prepare area specific guidance for the Strategic Development and Regeneration Areas (SDRAs) and Key District Centres (KDCs) using the appropriate mechanisms of local area Plans (LAPs), Strategic Development Zones (SDZs), etc. Zoning and Standards: The zoning and standards provisions of the plan have been devised to support the delivery of the core strategy. In particular, the zoning provision ensures adequate land to meet the population targets and 	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	<p>Potential cumulative/in combination impacts. The Core Strategy and Vision promotes the consolidation and intensification of the city. This has both positive and negative impacts. The potential significant adverse impacts, if not mitigated, are as follows:</p> <ol style="list-style-type: none"> Increased number of flood events due to increased development pressure. Possible restrictions on the location of development due to flooding Failure to tackle climate change and emissions from transport/climate change Short-term impacts on air and noise during construction works Potential impacts on quality and status of water bodies Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species Increase in waste Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures Impacts arising from visual impacts on landscape

Chapter 02 Vision and Core Strategy	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>economic role of the city as the national gateway, intensification along public transport corridors and a mixed use approach to zonings. The standards reinforce this approach with clear guidance for quality residential development, successful neighbourhoods and green infrastructure.</p> <ul style="list-style-type: none"> Monitoring Indicators: This is a dynamic plan and will be actively implemented. A set of measurable indicators to measure progress on the implementation of the plan have been devised. The SEA and AA that have informed the Plan will also be monitored. Engagement with city stakeholders: Engagement around the vision and implementation of the Plan is essential to achieving a sustainable Dublin All the policies and objectives in the Plan flow from and are consistent with higher level national and regional policies in that they promote intensification and consolidation of Dublin city, all of which lies within the metropolitan area. This will be achieved by way on in-filling and brownfield development, regenerations and renewal of the inner city, redevelopment of strategic regeneration areas and the use of higher densities, especially in public transport catchments. Policies also support the creation of a compact city to compact at international levels, with mixed use environments, sustainable neighbourhoods, green infrastructure, and impacts of climate change and flooding. 									<p>Provision of LAPs/SDZs is generally a good idea as this lower level of planning will be able to take specific environmental issues into account. However, it is noted that producing a number of LAPs/SDZs could give rise to cumulative impacts on the environment which will not be recognised in individual documents. The cumulative impacts could be addressed by the AA and SEA processes.</p>

Chapter 03 (Objectives) Addressing Climate Change	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CCO1: To implement the 'National Climate Change Adaptation Framework' (2012) by adopting a Climate Change Action Plan for Dublin City which will assist towards meeting National and EU targets. This will be adopted by end of 2018.	+	+	+	+	0	0	0	0	No potential adverse impacts on EPOs
CCO2: To support the implementation of the forthcoming 'Climate Change Strategy for Dublin and Climate Change Action Plan for Dublin city.	+	+	+	+	0	0	0	0	No potential adverse impacts on EPOs
CCO3: To support the implementation of the national level 'Strategy for Renewable Energy 2012–2020' and the related National Renewable Energy Action Plan (NREAP) and National Energy Efficiency Action Plan (NEEAP).	+	0	+	+	0	0	0	0	No potential adverse impacts on EPOs
CCO4: To support the implementation of the 'Dublin City Sustainable Energy Action Plan 2010–2020' and any replacement plan made during the term of this Plan.	+	0	+	+	0	0	0	0	No potential adverse impacts on EPOs
CCO5: To support and collaborate on initiatives aimed at achieving more sustainable energy use, particularly in relation to the residential, commercial and transport sectors.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CCO6: To promote the concept of carbon-neutral sustainable communities throughout the city and to seek to initiate and support carbon neutral demonstration projects in conjunction with local communities.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CCO7: To actively promote and facilitate the growth of the new emerging green industries to contribute both to the reduction of the city's energy consumption levels and to the role of the city as a leader in environmental sustainability.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CCO8: In conjunction with codema, to complete a comprehensive spatial energy demand analysis to help align the future energy demands of the city with sustainable energy solutions.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs

Chapter 03 (Objectives) Addressing Climate Change	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CCO9: To encourage the production of energy from renewable sources, such as from Bio-Energy, Solar Energy, Hydro Energy, Wave/Tidal Energy, Geothermal, Wind Energy, Combined Heat and Power (CHP), Heat Energy Distribution such as District Heating/Cooling Systems, and any other renewable energy sources, subject to normal planning considerations, including, in particular, the potential impact on areas of environmental sensitivity, including Natura 2000 sites.	+	?	+	+	0	+	0	0	No potential adverse impacts on EPOs. Unknown impact on biodiversity. Mitigation as objective has regard to the environmental sensitivity of Natura 2000 sites.
CCO10: To support renewable energy pilot projects which aim to incorporate renewable energy into schemes where feasible.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CCO11: To support and seek that the review of the National Building Regulations be expedited with a view to ensuring that they meet or exceed the passive house standard or equivalent, with particular regard to energy performance and other sustainability considerations, to alleviate poverty and reduce carbon reduction targets.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CCO12: To ensure high standards of energy efficiency in existing and new developments in line with good architectural conservation practice and to promote energy efficiency and conservation in the design and development of all new buildings in the city, encouraging improved environmental performance of building stock.	+	0	+	+	0	+	+	0	No potential adverse impacts on EPOs
CCO13: To support and encourage pilot schemes which promote innovative ways to incorporate energy efficiency into new developments.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CCO14: To support the government's target of having 40% of electricity consumption generated from renewable energy sources by the year 2020.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CCO15: To facilitate the provision of electricity charging infrastructure for electric vehicles.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs

Chapter 03 (Policies) Addressing Climate Change	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CC1: To prioritise measures to address climate change by way of both effective mitigation and adaptation responses in accordance with available guidance and best practice.	+	0	+	+	+	0	0	0	No potential adverse impacts on EPOs
CC2: To mitigate the impacts of climate change through the implementation of policies that reduce energy consumption, reduce energy loss/wastage, and support the supply of energy from renewable sources.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
C3: To promote energy efficiency, energy conservation, and the increased use of renewable energy in existing and new developments.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CC4: To encourage building layout and design this maximises daylight, natural ventilation, active transport and public transport use.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPOs
CC5: To address flood risk at strategic level through the process of strategic flood risk assessment, and through improvements to the city's flood defences (see appendix 11).	+	0	+	0	+	+	0	0	No potential adverse impacts on EPOs

Chapter 04 (Objectives) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SCO1: To implement a programme of environmental improvements along the Grand Civic Spine from Parnell Square to Christchurch Place, including College Green and Dame Street, arising from the opportunities provided by the introduction of the College Green Bus Priority System, the Luas Cross City and the 'Dubline' initiative.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SCO2: To implement the actions and projects contained in the Dublin City Public Realm Strategy 2012 and any successor public realm strategy.	+	0	0	0	0	0	0	+	No potential adverse impacts on EPOs

Chapter 04 (Objectives) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SCO3: To develop an active land management strategy for the city, which shall include mapping of brownfield and other lands, such as vacant, underutilised or large undeveloped sites, including Clontarf Baths, tracking progress on planning applications and identification of barriers to development, and which shall take account of the Dublin Inner City Vacant Land Study 2015 and any successor study, with the aim of promoting development on the lands identified, taking into account the actions contained in the Government's strategy for the construction sector, Construction 2020, public transport services and transport investment priorities.	+	0	0	0	0	+	0	+	No potential adverse impacts on EPOs
SCO4: To undertake a views and prospects study, with the aim of compiling a list of views and prospects for protection and/or enhancement which will be integrated with and complement the urban form and structure of the city.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPOs
SCO5: To prepare a number of local environmental improvement plans, Village Improvement Plans, Village Design Statements, or other non-statutory plans for existing District Centres and other areas in need of a relevant plan, in conjunction with the relevant Area Committee insofar as priorities and resources permit (see list of potential LEIPs at para 2.2.8.1).	+	+	0	0	0	0	0	+	No potential adverse impacts on EPOs
SCO6: To carry out an audit of existing street furniture poles and signage in the public realm, with the aim of removing at least 20% of such redundant elements, in order to reduce street clutter and to seek the multiple uses of poles for road and directional signage, including butterfly bike locking.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs

Chapter 04 (Objectives) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SCO7: To examine the possibility of closing the area along the river Liffey in front of the Customs House to motorised traffic on Saturdays and Sundays to create a new Public Plaza.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SCO8: To prioritise the redevelopment of College Green as a pedestrian-friendly civic space, including the pedestrianisation of Foster Place	+	0	0	0	0	+	0	0	No potential adverse impacts on EPOs
SCO9: To work with city business associations and agencies to provide for appropriately located, independently accessible sanitary facilities (public toilets, changing areas, showers and wash facilities, etc.) for the use of citizens and visitors to the city and accessible to all. (See Appendix 15).	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SCO10: To review the Pedestrian Wayfinding System in consultation with the Department of Transport, Tourism and Sport, Dublin Tourism, national cultural institutions and other civic interests in order to ensure the provision of appropriate signage for the principal places of interest in the city.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SCO11: To develop a map of significant public rights of way during the lifetime of the Plan.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SCO12: To investigate opportunities to access EU Structural Funds to support the regeneration of the city.	+	0	0	0	0	0	0	+	No potential adverse impacts on EPOs

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>SC1: To consolidate and enhance the inner city by linking the critical mass of existing and emerging clusters and communities such as Docklands, Heuston Quarter, Grangegorman, Stoneybatter, Digital Hub, Newmarket, Parnell Square, the Ship Street Area and Smithfield with each other, and to regeneration areas.</p>	+	+/-	+/-	+/-	-	+/-	-	0/-	<p>Policies that promote and intensification of the city would have both positive and negative impacts. The potential significant adverse impacts, if not mitigated are as follows:</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short-term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SC2: To develop the city's character by cherishing and enhancing Dublin's renowned streets, civic spaces and squares; to create further new streets as part of the public realm when the opportunities arise; to protect the grain, scale and vitality of city streets; to revitalise the north and south Georgian squares and their environs, and to upgrade Dame Street/College Green as part of the Grand Civic Spine.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPOs
SC3: To develop a sustainable network of safe, clean, attractive pedestrian routes, lanes and cycle ways in order to make the city more coherent and navigable	+	+/-	0	+	0	+	0	0	Possible adverse impact due to fragmentation of habitats
SC4: To promote a variety of recreational and cultural events in the city's civic spaces.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPOs
SC5: To promote the urban design and architectural principles set out in Chapter 15, and in the Dublin City Public Realm Strategy 2012, in order to achieve a quality, compact, well-connected city.	+	+	0	0	0	+	+	+	No potential adverse impacts on EPOs

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SC6: To promote an exceptional urban design and architectural response in relation to any proposed re-development of the ESB Headquarters site on Fitzwilliam Street Lower, which respects and enhances the character and composition of the Georgian streetscape in terms of the solid to void ratio, the rhythm of windows and doors, the proportion and scale of the ground-floor storey to the upper storeys, parapet height, the quality and craft of materials and finishes (including brickwork), the relationship with the public realm (including the degree of public access), the way by which the building holds the Georgian street line, together with the long-term durability and environmental sustainability of the building, all in accordance with the Plan's urban design principles.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPOs
SC7: To protect and enhance important views and view corridors into, out of and within the city, and to protect existing landmarks and their prominence.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPOs
SC8: To recognise the distinctive character of the Docklands Regeneration Area and to work with the relevant authorities to increase connectivity with the city centre.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SC9: To support and recognise the important national and regional role of Dublin Port in the economic life of the city and region and to facilitate port activities and development, having regard to the Dublin Port Masterplan 2012–2040.	+	0	0	0	0	+	0	0	AA: No significant potential impact on European sites. The Masterplan for Dublin Port carried out an Environmental Assessments for port activities

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>SC10: To develop and support the hierarchy of the suburban centres, ranging from the top tier Key District Centres, to District Centres/Urban Villages and Neighbourhood Centres, in order to support the sustainable consolidation of the city and provide for the essential economic and community support for local neighbourhoods, including post offices and banks, where feasible, and to promote and enhance the distinctive character and sense of place of these areas</p>	+	-	+/-	+/-	-	+/-	-	-	<p>Policies that promote the intensification of the city would have both positive and negative impacts. The potential significant adverse impacts, if not mitigated, are as follows:</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short-term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape
<p>SC11: To promote employment and economic opportunities in the KDCs, District Centres/Urban Villages and in Neighbourhood Centres in the identified innovation corridors and clusters.</p>	+	0	0	0	-	+	0	0	<p>Increase in population will have potential impacts on water quality and supply, as the wastewater treatment plan is at capacity.</p>

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SC12: To ensure that development within or affecting Dublin's villages protects their character.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPOs
SC13: To promote sustainable densities, particularly in public transport corridors, which will enhance the urban form and spatial structure of the city; which are appropriate to their context, and which are supported by a full range of community infrastructure such as schools, shops and recreational areas, having regard to the safeguarding criteria set out in Chapter 16 (development standards), including the criteria and standards for good neighbourhoods, quality urban design and excellence in architecture. These sustainable densities will include due consideration for the protection of surrounding residents, households and communities.	+	-	+/-	+/-	-	+/-	0	+/-	<p>Policies that promote increased densities will have both positive and negative impacts. Potential negative impacts are:</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short-term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape
SC14: To promote a variety of housing and apartment types which will create both a distinctive sense of place, in particular, areas and neighbourhoods, including coherent streets and open spaces.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPOs

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SC15: To recognise and promote green infrastructure and landscape as an integral part of the form and structure of the city, including streets and public spaces.	+	+	+	0	0	0	0	+	No potential adverse impacts on EPOs
SC16: To recognise that Dublin city is fundamentally a low-rise city and that the intrinsic quality associated with this feature is protected whilst also recognising the potential and need for taller buildings in a limited number of locations subject to the provisions of a relevant LAP, SDZ or within the designated strategic development regeneration area (SDRA).	+	0	0	0	0	0	0	+	No potential adverse impacts on EPOs
SC17: To protect and enhance the skyline of the inner city, and to ensure that all proposals for midrise and taller buildings make a positive contribution to the urban character of the city, having regard to the criteria and principles set out in Chapter 15 (guiding principles) and Chapter 16 (development standards). In particular, all new proposals must demonstrate sensitivity to the historic city centre, the river Liffey and quays, Trinity College, the cathedrals, Dublin Castle, the historic squares and the city canals, and to established residential areas, open recreation areas and civic spaces of local and citywide importance.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPOs
SC18: To promote a co-ordinated approach to the provision of tall buildings through local area plans, strategic development zones and the strategic development and regeneration areas principles, in order to prevent visual clutter or cumulative negative visual disruption of the skyline.	+	0	0	0	0	+	0	+/-	Potential impacts arising from visual impacts of tall buildings.

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SC19: To promote the development of a network of active, attractive and safe streets and public spaces that are memorable, and include where appropriate seating, and which encourage walking as the preferred means of movement between buildings and activities in the city. In the case of pedestrian movement with major developments, the creation of a public street is preferable to an enclosed arcade or other passageway.	+	0	+	+	0	+	0	+	No potential adverse impacts on EPOs
SC20: To promote the development of high-quality streets and public spaces that are accessible and inclusive, and which deliver vibrant, attractive, accessible and safe places and meet the needs of the city's diverse communities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SC21: To promote the development of a built environment and public spaces that are designed to deter crime and anti-social behaviour, which promote safety and which accord with the principles of universal design, as set out in the Dublin City Public Realm Strategy.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SC22: To consider appropriately designed and located advertising structures primarily with reference to the zoning objectives and permitted advertising uses and with secondary consideration of the Outdoor Advertising Strategy. In all such cases, the structures must be of high-quality design and materials, and must not obstruct or endanger road users or pedestrians, nor impede free pedestrian movement and accessibility of the footpath or roadway.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SC23: To actively seek the removal of unauthorised advertisements, fabric banners, meshes, banner or other advertising forms from private property and public areas.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SC24: To consolidate and expand the Pedestrian Wayfinding System which will provide a basis for a more coherent system of pedestrian signage.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SC25: To promote development which incorporates exemplary standards of high-quality, sustainable and inclusive urban design, urban form and architecture befitting the city's environment and heritage and its diverse range of locally distinctive neighbourhoods, such that they positively contribute to the city's built and natural environments. This relates to the design quality of general development across the city, with the aim of achieving excellence in the ordinary, and which includes the creation of new landmarks and public spaces where appropriate.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPOs
SC26: To promote and facilitate innovation in architectural design to produce contemporary buildings which contribute to the city's acknowledged culture of enterprise and innovation, and which mitigates and is resilient to, the impacts of climate change.	+	0	+	0	0	0	0	0	No potential adverse impacts on EPOs
SC27: To stimulate innovation and quality in design, design competitions will be promoted for significant developments.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
SC28: To promote understanding of the city's historical architectural character to facilitate new development which is in harmony with the city's historical spaces and structures.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPOs
SC29: To discourage dereliction and to promote the appropriate sustainable re-development of vacant and brownfield lands, and to prioritise the re-development of sites identified in Dublin Inner City Vacant Land Study 2015.	+	+/-	0	0	0	+	0	+	Potential impacts on biodiversity due to development of sites.

Chapter 04 (Policies) Shape and Structure of the City	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>SC30: To promote residential use on upper floors of existing and new buildings and to support the government’s Living City Initiative.</p>	+	0	0	0	0	+	0/?	0	<p>No potential adverse impacts on EPOs. There is a potential unknown impact as a result of policy promoting residential accommodation on the upper floors of premises which may be protected as this may have an adverse impact on the integrity of the building; however, the impact is also potentially beneficial as it may result in bringing underused buildings of architectural merit back into use.</p>

Chapter 05 (Objectives) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH01: To undertake a study to examine the potential for existing low to medium-density residential development to accommodate additional residential development in a manner which optimises residential density whilst respecting residential amenities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH02: To undertake a review of the Dublin City Council Housing Strategy as part of the mandatory two-year review process.	0	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH03: To instigate the design of a prototype block of age friendly apartments for older people based on age friendly design principles in conjunction with other bodies as appropriate in order to inform a model of good practice.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH04: To undertake a review of the private rented sector models serving various population cohorts to inform future planning policy and standards.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH1: To have regard to the DECLG Guidelines on 'Quality Housing for Sustainable Communities – Best Practice Guidelines for Delivering Homes Sustaining Communities' (2007); 'Delivering Homes Sustaining Communities – Statement on Housing Policy' (2007), 'Sustainable Urban Housing: Design Standards for New Apartments' (2015) and 'Sustainable Residential Development in Urban Areas' and the accompanying Urban Design Manual: A Best Practice Guide (2009).	+	0	0	0	0	+	0	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>QH2: To have regard to the Regional Planning Guidelines for the Greater Dublin Area and make provision for the scale of population growth and housing allocations outlined in these Guidelines taking account of the Central Statistics Office Regional Population Projections 2016–2031 and to have regard to any Regional Spatial and Economic Strategy that replaces the Regional Planning Guidelines.</p>	+	-	+/-	+/-	-	+/-	+/-	+/-	<p>Policies which promote consolidation and intensification of the city would have both positive and negative impacts. The potential significant adverse impacts, if not mitigated, are as follows:</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short-term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape.

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>QH3:</p> <p>i. To secure the implementation of the Dublin City Council Housing Strategy in accordance with the provision of national legislation. In this regard, 10% of land zoned for residential uses, or for a mixture of residential and other uses, shall be reserved for the provision of social and/or affordable housing in order to promote tenure diversity and a socially inclusive city.</p> <p>ii. To engage in active land management including the implementation of the vacant levy on all vacant residential and regeneration lands as set out in the Urban Regeneration and Housing Act 2015.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPOs
<p>QH4: To support proposals from the Housing Authority and other Approved Housing Bodies and Voluntary Housing Bodies in appropriate locations subject to the provisions of the Development Plan.</p>	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>QH5: To promote residential development addressing any shortfall in housing provision through active land management and a co-ordinated planned approach to developing appropriately zoned lands at key locations, including: regeneration areas, vacant sites and underutilised sites.</p>	+	-	+/-	+/-	-	+/-	+/-	+/-	<p>Policies which promote increased residential development and intensification of the city would have both positive and negative impacts. The potential significant adverse impacts, if not mitigated, are as follows:</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short-term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape.
<p>QH6: To encourage and foster the creation of attractive mixed use sustainable neighbourhoods that contain a variety of housing types and tenures with supporting community facilities, public realm and residential amenities, and which are socially mixed in order to achieve a socially inclusive city.</p>	+	0	0	+	0	+	0	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>QH7: To promote residential development at sustainable urban densities throughout the city in accordance with the core strategy, having regard to the need for high standards of urban design and architecture and to successfully integrate with the character of the surrounding area.</p>	+	+/-	+/-	+/-	-	+/-	+/-	+/-	<p>Policies which promote increased residential development and intensification of the City would have both positive and negative impacts. The potential significant adverse impacts, if not mitigated, are as follows :</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on Entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape.

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH8: To promote the sustainable development of vacant or under-utilised infill sites and to favourably consider higher density proposals which respect the design of the surrounding development and the character of the area.	+	-	0	0	-	+	0	0	<p>Policies which promote intensification of the city and development of vacant sites would have both positive and negative impacts. The potential significant adverse impacts, if not mitigated, are as follows:</p> <p>a. Increased number of flood events due to increased development pressure</p> <p>b. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species</p>
QH9: To require that larger schemes which will be developed over a considerable period of time are developed in accordance with an agreed phasing programme to ensure that suitable physical, social and community infrastructure is provided in tandem with the residential development and that substantial infrastructure is available to initial occupiers.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPOs
QH10: To support the creation of a permeable, connected and well-linked city and discourage gated residential developments as they exclude and divide established communities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH11: To ensure new developments and refurbishments are designed to promote safety and security and avoid anti-social behaviour in accordance with the Safety and Security Design Guidelines contained in the Appendices.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH12: To promote more sustainable development through energy end-use efficiency, increasing the use of renewable energy, and improved energy performance of all new development throughout the city by requiring planning applications to be supported by information indicating how the proposal has been designed in accordance with the development standards set out in the Plan.	+	0	+	0	0	+	0	0	No potential adverse impacts on EPOs
QH13: To ensure that all new housing is designed in a way that is adaptable and flexible to the changing needs of the homeowner as set out in The Residential Quality Standards and with regard to the Lifetime Homes guidance contained in Section 5.2 of the Department of Environment, Heritage and Local Government 'Quality Housing for Sustainable Communities – Best Practice Guidelines for Delivering Homes Sustaining Communities' (2007).	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH14: To support the concept of independent living and assisted living for older people, to support the provision of specific purpose-built accommodation, and to promote the opportunity for older people to avail of the option of 'downsizing' to support the promotion of policies that will: <ul style="list-style-type: none"> • Encourage/promote full usage of dwellings units • Incentivise property owners of underutilised dwellings to relocate to smaller age-friendly dwellings • Actively promote surrendering larger accommodation/financial contribution schemes without compulsion. 	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH15: To require compliance with the City Council's policy on the taking-in-charge of residential developments.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH16: To promote efficient and effective property management in order to secure the satisfactory upkeep and maintenance of communal areas and facilities in the context of the Multi-Unit Developments Act 2011, the Property Services (Regulation) Act 2011 and the establishment of the Property Services Regulatory Authority.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH17: To support the provision of purpose-built, managed high-quality private rented accommodation with a long-term horizon.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH18: To promote the provision of high-quality apartments within sustainable neighbourhoods by achieving suitable levels of amenity within individual apartments, and within each apartment development, and ensuring that suitable social infrastructure and other support facilities are available in the neighbourhood, in accordance with the standards for residential accommodation.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPOs
QH19: To promote the optimum quality and supply of apartments for a range of needs and aspirations, including: households with children, in attractive sustainable mixed-income, mixed use neighbourhoods supported by appropriate social and other infrastructure.	+	0	0	0	-	+	0	0	Increase in population will have potential impacts on water quality and supply, as the wastewater treatment plan is at capacity
QH20: To ensure apartment developments on city Council sites are models of international best practice and deliver the highest quality energy efficient apartments with all the necessary infrastructure where a need is identified, to include community hubs, sports and recreational green open spaces and public parks and suitable shops contributing to the creation of attractive, sustainable, mixed use and mixed-income neighbourhoods.	+	0	+	0	0	+	0	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH21: To ensure that new houses provide for the needs of family accommodation with a satisfactory level of residential amenity, in accordance with the standards for residential accommodation	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH22: To ensure that new housing development close to existing houses has regard to the character and scale of the existing houses unless there are strong design reasons for doing otherwise.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH23: To discourage the demolition of habitable housing unless streetscape, environmental and amenity consideration are satisfied, and a net increase in the number of dwelling units is provided in order to promote sustainable development by making efficient use of scarce urban land.	+	0	0	0	0	+	0	+	No potential adverse impacts on EPOs
QH24: To resist the loss of residential use on upper floors and actively support proposals that retain or bring upper floors above ground floor premises into residential use in order to revitalise the social and physical fabric of the city through measures such as the Living City Initiative and allowing scope for the residential development standards to be relaxed for refurbishment projects subject to the provision of good quality accommodation as outlined in the development standards. To proactively promote and market the Living City Initiative in Dublin city in order to attract and encourage investment in the city's valuable building fabric within the designated Living City Initiative area.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH25: To encourage the re-introduction of residential use into the historic areas of the city, where much of the historic fabric remains intact (e.g., the Georgian and Victorian areas), provided development is consistent with the architectural integrity and character of such areas	+	0	0	0	0	0	+	0	No potential adverse impacts on EPOs

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH26: To promote the transformation of the key regeneration areas into successful socially integrated neighbourhoods, including those on the Main Inner City Regeneration Areas Map and promote area regeneration in parts of the city which require physical improvement and enhancement in terms of quality of life, housing and employment opportunities, including the Docklands. It is recognised that the nature of some housing regeneration initiatives may warrant the demolition of existing dwellings before proposals for new or replacement dwellings are agreed.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH27: To recognise the separate identity, culture, tradition and history of the Travelling community and to reduce the levels of disadvantage that Travellers experience.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH28: To provide a range of accommodation options for travellers who normally reside in the Dublin city area and who wish to have such accommodation in accordance with the Dublin City Council Traveller Accommodation Programme 2014–2018, and as updated during the life of the Plan.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPOs
QH29: To support the implementation of the Homeless Action Plan Framework for Dublin and support related initiatives to address homelessness.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 05 (Policies) Quality Housing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
QH30: To ensure that all proposals to provide or extend temporary homeless accommodation or support services shall be supported by information demonstrating that the proposal would not result in an undue concentration of such uses nor undermine the existing local economy, resident community or regeneration of an area. All such applications shall include: a map of all homeless services within a 500m radius of the application site, a statement on the catchment area identifying whether the proposal is to serve local or regional demand; and a statement regarding management of the service/facility.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
QH31: To support the provision of high quality, professionally managed and purpose built third-level student accommodation on campuses or in appropriate locations close to the main campus, in the inner city or adjacent to high quality public transport corridors and cycle routes, in a manner which respects the residential amenity and character of the surrounding area, in order to support the knowledge economy. Proposals for student accommodation shall comply with the 'Guidelines for Student Accommodation' contained in the in the development standards.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 06 (Objectives) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CEE01: To develop a brand identity for Dublin based on the city's distinctive identity, built heritage and environment, unique achievements and competitive advantage as international city region.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPO
CEE02: To carry out an assessment of the challenges and barriers to regeneration as well as the opportunities and to bring forward recommendations for action.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
CEE03: To examine the potential for the development of a 'Food Hubs' in the city.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
CEE04: i. To carry out a targeted survey of those industrial estates with likely redevelopment potential, and to make recommendations on how that redevelopment potential might be best achieved. ii. To carry out a study on the potential of lands zoned for enterprise and employment space, the adequacy of such potential supply, and the issue of underutilised/vacant lands.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
CEE05: To carry out a study on how to enhance the environs of the Fruit and Veg Market and its linkages with the vibrant hubs of Henry St and Capel St and on to Smithfield and Heuston in order to enhance the economic development, employment generation, and tourism potential of the area.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CEE1:</p> <p>i. To promote and enhance the role of Dublin as the national economic engine and driver of economic recovery and growth, with the city centre as its core economic generator.</p> <p>ii. To promote and enhance the city's competitiveness and to address deficits, to improve the business environment so that existing jobs are supported and employment generated, and to be creative and practical in its responses to current economic challenges and opportunities.</p>	+	-	+/-	+/-	-	+	-	-	<p>Policies which promote consolidation and intensification of the city have both positive and negative impacts. The potential significant adverse impacts, if not mitigated, are as follows:</p> <p>a. Increased number of flood events due to increased development pressure</p> <p>b. Failure to tackle climate change and emissions from transport/climate change</p> <p>c. Short-term impacts on air and noise during construction works</p> <p>d. Potential impacts on quality and status of water bodies</p> <p>e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species</p> <p>f. Increase in waste</p> <p>g. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures</p> <p>h. Impacts arising from visual impacts on landscape</p>

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CEE2: To recognise the crucial need for the planning and sustainable development system to be agile and responsive in the face of challenging and rapidly changing circumstances. Dublin City Council will promote sustainable development by balancing complex sets of economic, environmental or social goals in planning decisions.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
CEE3: To take a positive and proactive approach when considering the economic impact of major planning applications in order to support economic development, enterprise and employment growth and also to deliver high-quality outcomes.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
CEE4: i. To promote and facilitate Dublin as a creative and innovative city that is globally competitive, internationally linked, attractive and open. ii. To promote an internationalisation strategy building mutually-beneficial economic and other links with key cities globally to encourage investment and tourism, etc. in Dublin. iii. To promote jobs which provide quality of life and allow workers to play a full social and economic role in the development of the city.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CEE5:</p> <p>i. To recognise that cities are crucibles of innovation and that the city centre Z5 zoned area and inner city area, including the Docklands, is the crucial metropolitan and national resource for innovation, promoting the proximity and diversity of uses that foster innovation.</p> <p>ii. To recognise that high-quality and dense development drives productivity and innovation in a city.</p> <p>iii. To recognise the need to improve linkages between the key economic areas of the city such as Docklands, the central business district, Heuston, Newmarket and the Digital Hub area by improving facilities for pedestrians and cyclists, facilitating public transport, improving the public domain and tackling vacant sites/dilapidated buildings.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
<p>CEE6: To recognise the economic and social benefits, including the international competitiveness benefits, of qualities of diversity, equality and openness in the city; and to have regard to equality and human rights in the carrying out of planning functions as required under the Irish Human Rights and Equality Commission Act 2014.</p>	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
<p>CEE7: To recognise that 'quality of place', 'clean, green, safe', is crucial to the economic success of the city, in attracting foreign and domestic investment, and in attracting and retaining key scarce talent, tourists, and residents.</p>	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CEE8:</p> <p>i. To promote and facilitate foreign direct investment into the city by, e.g., working closely with the IDA and other agencies, and having regard to the needs of international investment.</p> <p>ii. To recognise that there is a role for Dublin City Council in building the confidence of potential investors and entrepreneurs to choose Dublin.</p>	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
<p>CEE9: To build on and promote the Dublin-Belfast economic corridor in order to maximise the advantages of north-south links and the development of an all Ireland economy.</p>	+	0/?	0	0	0	+	0	?	Along with the benefits associated with development along the Dublin-Belfast Economic Corridor, there will be similar impacts, however, through collaborating with other local authorities the cumulative impacts on the environment will have to be considered.
<p>CEE10: To promote and facilitate the implementation of the policies and objectives of the Local Economic and Community Plan.</p>	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
<p>CEE11: To promote and facilitate the supply of commercial space, where appropriate, e.g., retail and office, including: larger floor-plates and quanta suitable for indigenous and FDI HQ-type uses, as a means of increasing choice and competitiveness, and encouraging indigenous and global HQs to locate in Dublin; to consolidate employment provision in the city by incentivising and facilitating the high-quality redevelopment of obsolete office stock in the city.</p>	+	0/-	0	0	-	+	0	0	Increase in population will have potential impacts on water quality and supply, as the wastewater treatment plan is at capacity and this could impact on species.

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CEE12:</p> <p>i. To promote and facilitate tourism as one of the key economic pillars of the city's economy and a major generator of employment and to support the provision of necessary significant increase in facilities such as hotels, apart hotels, tourist hostels, cafes, and restaurants, visitor attractions, including those for children.</p> <p>ii. To promote and enhance Dublin as a world class tourist destination for leisure, culture, business and student visitors.</p> <p>iii. To promote and facilitate the optimum benefits (including the international marketing benefits) to the city of the Convention Centre Dublin, as well as all other major existing and future visitor attractions.</p>	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
<p>CEE13:</p> <p>i. To work with Failte Ireland and other stakeholders, to deliver on the ambitious targets set out in 'Destination Dublin' – A Collective Strategy for Growth to 2020; (Grow Dublin Taskforce, including an aim to double the number of visitors by 2020).</p> <p>ii. To support the preparation, adoption and implementation of a strategic regional plan for tourism for the Dublin city region, to provide a framework for the sustainable and efficient provision and management of tourism across the region.</p> <p>iii. This Plan will include policies to promote and support the development of additional tourism accommodation at appropriate locations throughout the city.</p>	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CEE14: To recognise that many of our key tourist attractions are in regeneration areas with challenges of dilapidated buildings, vacant sites, and public domain in need of improvement; and to develop projects such as Dubliner that will address these challenges.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
CEE15: To promote and facilitate the transformation of regeneration areas especially inner city areas as a key policy priority and opportunity to improve the attractiveness and competitiveness of the city, including promoting high quality private and public investment and by seeking European Union Funding to support regeneration initiatives, to the benefit of residents, employees and visitors.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CEE16:</p> <p>i. To engage in the ‘active land management’ of vacant sites and properties, including those owned by Dublin City Council, as set out in the Government’s Planning Policy Statement 2015; to engage proactively with land-owners, potential developers and investors with the objective of encouraging the early and high quality re-development of such vacant sites.</p> <p>ii. To implement the Vacant Land Levy for all vacant development sites in the city and to prepare and make publicly available a Register of Vacant Sites in the city as set out in the Urban Regeneration and Housing Act 2015.</p> <p>iii. To improve access to information on vacant land in the city, including, details such as location, area, zoning, etc., via appropriate media/online resources and the keeping of a public register as a basis of a public dialogue in the public interest.</p> <p>iv. To encourage and facilitate the rehabilitation and use of vacant and under-utilised buildings, including their upper floors.</p> <p>v. To promote and facilitate the use, including the temporary use, of vacant commercial space and vacant sites, for a wide range of enterprise, including cultural uses, and which would comply with the proper planning and sustainable development of the area and the provisions of the Plan.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
<p>CEE17: To promote social labour clauses and living wage employment for Dublin City Council developments, and encourage living wage employment generally in the city.</p>	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CEE18:	+	-	0	0	-	+	0	0	<p>Policies which promote intensification of the City would have some negative impacts. The potential significant adverse impacts, if not mitigated, are as follows :</p> <p>a. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species</p>
i. To identify and support new and growth economic development and employment sectors in the city.									
ii. To support the work of the City Council’s Local Enterprise Office (LEO) as a core instrument of local economic and enterprise support and development for SMEs and micro-enterprises.									
iii. To recognise that craft distilleries, breweries, etc., along with visitor centres, provide economic development and regeneration potential for the city, including, the promotion of tourism. To promote Dublin as a destination for such craft enterprises.									
iv. To recognise the major economic potential of the café/ restaurant/sectors, including as an employment generator; making the city more attractive for workers, residents, and visitors; providing informal work and business meeting spaces; to be a part of the city’s innovation ecosystem; and to encourage the provision of new cafes and restaurants, included in Category Two Retail Streets.									
v. To recognise that markets, indoor and outdoor, food and other products have major economic potential, including key tourist attractions and supports for start-up enterprises.									
vi. To recognise the unique importance of Moore Street Market to the history and culture of the city and to ensure it’s protection, renewal and enhancement, in co-operation with the traders, as advocated by the Moore Street Advisory									

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
vii. Committee Recommendation relating thereto.									
viii. To carry out a survey of surface car parks in the central city area to include an assessment of their development potential and any zoning or other issues that may facilitate development.									
ix. To recognise that craft enterprises, designer's studios/workshops, etc., along with visitor centres, provide economic development and regeneration potential for the city, including the promotion of tourism. To promote Dublin City Centre as a destination for such craft enterprises.									
CEE19:	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
i. To promote Dublin as an International Education Centre/Student City, as set out in national policy, and to support and encourage provision of necessary infrastructure such as colleges (including, English Language Colleges) and high quality custom built and professionally managed student housing.									
ii. To recognise that there is a need for significant extra high-quality, professionally-managed student accommodation developments in the city; and to facilitate the high-quality provision of such facilities.									
CEE20: To recognise that hospitals and the wider healthcare sector are crucial to the wellbeing of the city, including the fact that they are major sources of employment, economic development and innovation; and to promote and facilitate their development and expansion.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CEE21:</p> <p>i. To recognise the strategic role of the hospital complexes in the city, including the proposed National Paediatric Hospital and the proposed new National Maternity Hospital and to support the provision of the appropriate volume of floor space and associated facilities necessary to secure the delivery of their services and potential; having regard to their national medical function, their role as a major employer in the city, as a generator of significant economic benefits for the economy of Dublin’s inner city and a promoter of the knowledge economy through research and education links with third-level colleges in the city.</p> <p>ii. To promote and facilitate the continued development of the Dublin 8 area as medical hub of excellence.</p> <p>iii. To capitalise on the opportunities presented by the major public investment in healthcare facilities on the St James’s Hospital campus, including the National Paediatric Hospital, by promoting the wider catchment area as a suitable location for new development, which will either directly support such new facilities (such as by improving public realm in the vicinity and by encouraging the provision of housing for hospital staff); or which will benefit from locational synergy with the hospitals, such as new enterprises in the bio and life sciences, healthcare and related ICT and medical supplies sectors.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
iv. To recognise the significant economic and employment benefits of the clustering of similar enterprises in an area.									
v. To promote and facilitate the development of various clusters or hubs in the city such food, creative industries, craft enterprises, green business etc. (vi) To promote and facilitate Dublin city as a hub for social enterprise in order to help address some of the critical needs within the city.									
CEE22: To promote and facilitate the crucial economic and employment potential of regeneration areas in the city such as Dublin 1, 7 and 8.	+	0	0	0	-	+	0	0	Increase in population will have potential impacts on water quality and supply, as the wastewater treatment plan is at capacity.

Chapter 06 (Policies) City Economy and Enterprise	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CEE23:</p> <p>i. To promote the Digital Hub and its environs as a destination of choice for digital enterprises, as an innovation district, with the necessary vibrant mix of uses, including: employment space, leisure, housing (including student accommodation), shopping, visitor accommodation and other uses.</p> <p>ii. To promote the Docklands as one of the city core economic generators, and as a destination for tourist/visitors and international conferences and to implement the economic-related policies of the Docklands SDZ.</p> <p>iii. To recognise that Dublin Port is a key economic resource, including cruise tourism; and to have regard to the policies and objectives of the Dublin Port Masterplan.</p> <p>iv. To recognise the economic potential of the Georgian quarters whether as visitor attractions or unique places to live or work in, as set out, e.g., in 'The Future of the South Georgian Core' (Dublin City Council 2012).</p>	+	0	0	0	-	+	0	0	Increase in population will have potential impacts on water quality and supply, as the wastewater treatment plan is at capacity.
<p>CEE24: To promote job creation and economic activity in the outer city. To promote and enhance a number of identified Key District Centres as significant employment centres as part of their development as mixed use service centres for the local economy, incorporating a range of retail, employment, recreational and community uses.</p>	+	0	0	0	-	+	0	0	Increase in population will have potential impacts on water quality and supply, as the wastewater treatment plan is at capacity.

Chapter 07 (Objectives) Retailing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
RDO1: To implement the retail hierarchy contained in the 'Retail Strategy' of this development plan, i.e., the city centre retail core, the district centres/urban villages, neighbourhood centres/shopping parades, local shops.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD02: To undertake a review of the Dublin City Development Plan Retail Strategy upon the adoption of the forthcoming Regional Spatial and Economic Strategy for the Eastern and Midlands Area. www.emra.ie	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 07 (Policies) Retailing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
RD1: To have regard to the 'Retail Strategy for the Greater Dublin Area 2008–2016' prepared by the Dublin and Mid-East Regional Authorities and the 'Guidelines for Planning Authorities – Retail Planning – DECLG, 2012' when preparing forward plans and in the assessment of retail-related planning applications. www.emra.ie and www.environ.ie.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD2: To require that proposed retail developments for large-scale or sensitive sites in line with environmental requirements, are accompanied by a retail design brief guided by the key principles contained in the 'Retail Design Manual – DECLG, 2012'. www.environ.ie.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD3: To encourage and facilitate temporary uses, especially ones affording public access and of creative and cultural uses for the visual and commercial improvement of retail areas.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD4: To seek to prohibit adult shops in proximity to residential areas, places of public worship and schools and to seek to prevent an excessive concentration of such uses having regard to the existing presence of such retail outlets in an area.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 07 (Policies) Retailing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
RD5: To prohibit the further expansion of off-licences or part off-licences unless a compelling case can be made that there is not an over-concentration of such uses in any one area. In this respect, any application for an off-licence/ part off-licence should include a map of all such establishments located within a 1 km radius of the proposed development. In relation to stand alone off-licences an audit of the existing off-licence floor space provision within 1 km and an analysis of the need for the proposal in the locality shall be provided.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD6: To promote and facilitate the major contribution of retail and other services to the vitality and success of the city, as a significant source of employment, a focus of tourism, as an important recreational activity and as a link with other cultural and recreational activities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD7: To facilitate indoor and outdoor markets both in the city centre and throughout the city, and to promote the clustering of complementary uses that add character and vitality to an area.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD8: To co-operate and consult with adjoining local authorities regarding the impact of retail plans or schemes with particular regard to the potential for significant cross-boundary impacts on the retail hierarchy or the retail areas in adjoining councils.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD9: To safeguard the health of young people that no further fast food outlets shall be permitted within 250 m of primary and secondary school, (not to apply to Deli and Convenience Stores), unless an evidence based case is made by the applicant that the proposed development would be in the interests of the proper planning and development of the area.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 07 (Policies) Retailing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
RD10: To control the provision of retail warehousing and retail parks in accordance with the advice set out in the 'Guidelines for Planning Authorities – Retail Planning – 2012, DECLG'. www.environ.ie .	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD11: To promote and facilitate the provision of accessible good quality convenience shopping that will engender competition and service all areas of the city, particularly with regard to the inner city.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
RD12: To ensure that Dublin adapts to developments in retail formats and changing lifestyles, having regard to the retail and settlement hierarchy set out in the core strategy.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD13: To affirm and maintain the status of the city centre retail core as the premier shopping area in the State, affording a variety of shopping, cultural and leisure attractions and having regard to relevant objectives set out in the Retail Core Framework Plan (2007).	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD14: To have regard to the architectural fabric and fine grain of traditional retail frontages, whilst providing for modern retail formats necessary for a vibrant city centre retail core.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
RD15: To require a high quality of design and finish for new and replacement shopfronts, signage and advertising. Dublin City Council will actively promote the principles of good shopfront design as set out in Dublin City Council's Shopfront Design Guidelines. www.dublincity.ie	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD16: To facilitate and support Dublin's Business Improvement District (BID) and particularly the promotion and facilitation of a vibrant and safe night economy. www.wearedublintown.ie .	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 07 (Policies) Retailing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
RD17: To promote active uses at street level on the principal shopping streets in the city centre retail core and in Z4 district centres and having regard to the criteria for Category 1 and Category 2 streets and Special Areas of Planning Control.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD18: To ensure the adequate and appropriate retail provision in the emerging or key developing areas such as Cherryorchard/Parkwest, North Fringe, Pelletstown and the Docklands.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD19: To promote the retail provision in the Key District Centres, District Centres and Neighbourhood Centres, including the revitalisation of existing established centres, (see Appendix 3 Retail Strategy).	+	0/-	0	0	-	+	0	0	Increase in population will have potential impacts on water quality and supply, as the wastewater treatment plan is at capacity.
RD20: To promote and facilitate the provision of accessible good quality convenience shopping with strong choice and competition within the inner city area and in developing areas to ensure that adequate provision is made for the increased population now living in the city; and reducing the numbers travelling the outer suburbs to meet their convenience needs and to attract and retain families with children in the city, as set out in Retail Strategy for the Greater Dublin Area.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
RD21: To promote and facilitate competition and innovation in the retail and other service sectors to the benefit of competitiveness and the consumer, as an integral part of the proper planning and sustainable development of the city.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 07 (Policies) Retailing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
RD22: To encourage environmental and streetscape improvement works conducive with the improvement of the pedestrian environment and the creation of better linkages within and between shopping areas in the city centre retail core in line with the objectives of 'Your City, Your Space – Dublin City Public Realm Strategy, 2012' www.dublincity.ie	+	0	0	0	0	0	0	+	No potential adverse impacts on EPO
RD23: To facilitate an increase in the amount of retail floor-space to accommodate higher order comparison goods retailing and including where appropriate, the provision of larger shop units in the city centre retail core.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
RD24: To promote and facilitate the ongoing implementation of the City Markets Project, centred around the Victorian Fruit and Vegetable Market on Mary's Lane, an important aspect in city centre regeneration. www.dublincity.ie .	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 07 (Policies) Retailing	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>RD25: To facilitate the development of a new district centre and ancillary retail hubs as articulated in the North Lotts and Grand Canal Dock Strategic Development Zone. www.dublincity.ie</p>	+	-	+/-	+/-	-	+/-	+/-	+/-	<p>Policies which promote growth and a new district centre would have both positive and negative impacts on the EPOs. The potential significant adverse impacts, if not mitigated, are as follows:</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short-term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on Entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>MTO1: To encourage intensification and mixed-use development existing and planned along public transport corridors and at transport nodes where sufficient public transport capacity and accessibility exists to meet the sustainable transport requirements of the development, having regard to conservation policies set out elsewhere in this plan and the need to make best use of urban land. Dublin City Council will seek to prepare SDZs, LAPs or other plans for areas surrounding key transport nodes, where appropriate, in order to guide future sustainable development.</p>	+	-	+/-	+/-	-	+/-	+/-	+/-	<p>Policies which promote growth and intensification would have both positive and negative impacts on the EPOs. The potential significant adverse impacts, if not mitigated, are as follows :</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on Entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape.

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MT02: To support the development and implementation of integrated ticketing and real time passenger information systems across the public transport network in association with relevant transport providers and agencies. Progress on the integration of Dublin shared bike scheme and Leap Card schemes will be monitored.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT03: To promote 'Park and Ride' services at suitable locations in co-operation with neighbouring local authorities.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MT04: To support improvements to the city's bus network and related services to encourage greater usage of public transport in accordance with the objectives of the NTA's strategy and the Government's 'Smarter Travel' document.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MT05: i. To facilitate and support measures proposed by transport agencies to enhance capacity on existing public transport lines and services, to provide/improve interchange facilities and provide new infrastructure. ii. Subject to a station layout assessment, to promote the re-instatement of station entrance at Amiens Street/Buckingham Street Junction.	+	0	+	+	0	+/?	0	0	No potential adverse impacts on EPO Positive indirect and cumulative impacts in relation to MA1 through subsequent upgrading.
MT06: To review future strategic provision of bus depots/garages in the city in consultation with Dublin Bus and the NTA.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT07: To promote and seek the development of a new commuter rail station at Cross Guns serving the existing rail line infrastructure. Such a provision may be a stand-alone facility or form part of a larger mixed use development.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MTO8: To promote and facilitate, in co-operation with key agencies and stakeholders, the provision of high density cycle parking facilities at appropriate locations, taking into consideration *inter alia) the NTAs Cycle Network Plan, Dublin City Centre Cycle Parking Strategy, and Dublin City Council's Public Realm Strategy.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MTO9: To develop, within the lifetime of this plan, the Strategic Cycle Network for Dublin city – connecting key city centre destinations to the wider city and the national cycle network, and to implement the NTA's Greater Dublin Area Cycle Network Plan, to bring forward planning and design of the Santry river Greenway, incorporating strongly integrative social and community development initiatives.	+	-	+	+	0	+	0	0/-	Potential for negative impacts on BFF1 through indirect negative impacts via disturbance and or cumulative impacts.
MTO10: To improve existing cycle ways and bicycle priority measures throughout the city, and to create guarded cycle lanes, where appropriate and feasible.	+	-	+	+	0	+	0	0/-	Potential for negative impacts on BFF1 through indirect negative impacts via disturbance and
MTO11: To review the 30 kph speed limit that applies within the city centre (i.e., area between the canals)	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO12: i. To monitor the success of the shared bike scheme and to expand it to the entire city, in accordance with the content of the dublinbikes Strategic Planning Framework 2011–2016 or any subsequent review ii. That developers will agree to fund the provision of a shared bike station near large developments, as community gain.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>MTO13: In accordance with cycle routes identified in the National Transport Authority's Greater Dublin Area Cycle Network Plan;</p> <p>i. To improve permeability for cyclists by reducing speed limits to 30 kph and allowing contraflow cycling on all single lane one way streets, and to provide a segregated contraflow cycle lane on all one way streets with two or more lanes, except where engineering report demonstrates risk is too high.</p> <p>ii. To improve the traffic environment for cycling by reducing traffic speeds through the introduction or expansion of 30 kph zones in compliance with the Department of Transport, Tourism and Sport document 'Guidelines for Setting and Managing Speed Limits in Ireland.</p>	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
<p>MTO14: To review availability of bicycle parking facilities at neighbourhood centres with a view to addressing any shortfall through provision of Sheffield-type bicycle parking in the immediate vicinity as required.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
<p>MTO15: To provide Sheffield Stand type parking near the entrance to all publicly accessible buildings such as schools, hotels, libraries, theatres, churches, etc.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
<p>MTO16: To seek to reopen the pathway underneath Blaquiery Bridge on the North Circular Road beside the old State Cinema in Phibsborough to pedestrians and cyclists.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
<p>MTO17: To extend the River Liffey Boardwalk westwards through the city centre from Capel Street towards Heuston.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MTO18: To develop a high-quality pedestrian environment at new public transport interchanges and to consider the needs of pedestrians in the design of all infrastructure projects.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO19: Subject to a feasibility assessment, to upgrade Cross Gunns Bridge Phibsborough for pedestrian and cyclist use.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO20: Subject to a feasibility assessment, to include a pedestrian/cyclist bridge over the Railway line at Whitworth Road connecting the Royal Canal to Whitworth Road at an appropriate site.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO21: To avail of opportunities to increase footpath widths particularly within the city centre where appropriate.	+	0	0	0	0	+	0	+	No potential adverse impacts on EPO
MTO22: To support public realm enhancements contained in this Plan that contribute to an improved pedestrian environment including those listed in Dublin City Council's Public Realm Strategy ('Your City – Your Space') and street improvement proposals contained in the Grafton Street Quarter Public Realm Plan together with public drinking fountains where deemed appropriate, feasible, not a risk to public health, and where they do not add to street clutter.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO23: To require Travel Plans and Transport Assessments for all relevant new developments and/or extensions or alterations to existing developments, as outlined in Appendix 4.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO24: To review and monitor Travel Plans through the Dublin City Council Mobility Management Section.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MTO25: To support the growth of Electric Vehicles and EBikes, with support facilities as an alternative to the use of fossil fuel-burning vehicles, through a roll-out of additional electric charging points in collaboration with relevant agencies at appropriate locations.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO26: To progressively eliminate all 'free' on-street parking, both within the canals and in adjacent areas where there is evidence of 'all day' commuter parking, through the imposition of appropriate parking controls, including disc parking.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO27: To renew restrictions on the use and cost of on-street parking and change them, as necessary, in order to discourage commuter parking, and to facilitate short-term parking for shopping, business and leisure purposes at appropriate locations.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO28: To develop lorry parks, bus parks and taxi holding areas in selected areas where deemed necessary and in co-operation with private enterprise, so as to eliminate the hazards of unsuitable lorry, bus and taxi parking in residential and other areas.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO29: To consider providing additional on-street motorcycle parking at various locations throughout the city where considered appropriate, to address current under-provision.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO30: To identify suitable and appropriate new locations (including off-street) in the city centre for the parking of private or tour-operated coaches with a view to discontinuing the practice of allowing coaches to park in such places as Mountjoy Square, College Green, Nassau Street, Merrion Square and Wilson Terrace.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>MTO31: To initiate and/or implement the following road improvement schemes and bridges within the six-year period of the development plan, subject to the availability of funding and environmental requirements, and compliance with the 'Principles of Road Development' set out in the NTA Transport Strategy</p> <p><u>Roads</u></p> <ul style="list-style-type: none"> • River Road • Richmond Road • Malahide Road/R107 (including North Fringe improvements) • Blackhorse Avenue (commenced) • Clonshaugh Road Industrial Estate • Ballymun (improved town centre linkage) • Kilmainham/South Circular Road • Link from Military Road to Conyngham Road • East Wall Road/Sheriff Street to North Quays • Cappagh Road. <p><u>Bridges</u></p> <ul style="list-style-type: none"> • Dodder Bridge • Liffey Valley Park Pedestrian/cycle bridge • Cycle/pedestrian bridges that emerge as part of the evolving Strategic Cycle Network and Strategic Green Infrastructure Network • Newcomen Bridge (upgrading for pedestrian and cyclists' use) • Three new bridges proposed as part of the North Lotts and Grand Canal Dock SDZ. 	+	?/-	0	+/-	0	+	0	?	<p>Short term impacts on noise and air quality during construction works,</p> <p>The road improvements schemes have the potential to impact significantly on the environment as a result of cumulative impacts.</p> <p>Unknown impact on landscape and biodiversity in terms of new bridges.</p> <p>Note: All major infrastructural projects will be subject to separate environmental assessments.</p>

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>MTO32: To protect the routes of the proposed eastern by-pass from Dublin Port existing Tunnel to Poolbeg, and in the longer term to provide a route corridor between Poolbeg and the Southern Cross/ South East Motorway (in accordance with the NTS Study for the Greater Dublin Area 2016–2035), also referred to as the Southern Port Access Route. The preferred route for DCC is by means of a bored tunnel, under Sandymount Strand and Merrion Strand and will be subject to full statutory Environmental Assessment, together with an Appropriate Assessment for the entire proposed routes, in accordance with the Habitats Directive, together with a full consultation process.</p>	+/-	-	+/-	+/-	0	+	0	+/-	<p>This objective in the Plan does not provide for the development of the eastern by-pass, rather it provides for the protection of the route (reservation corridor) pending a decision from Transport Infrastructure Ireland/ Central Government in relation to the future status of the by-pass. Any plans/ projects providing for the development of the route to occur, reservation of this route would need to be subject to SEA and AA as appropriate. Were development of the route to occur, reservation of the route corridor now would facilitate the avoidance of future disturbance areas and associated potential effects upon various environmental components.</p> <p>It should be noted that mitigation is already in place as the objective states that this is subject to a full Environmental Assessment together with an AA for the entire routes.</p>
<p>MTO33: To continue investment in the city’s computer based area traffic signal control system and in other Information Technology (IT) systems to increase the capacity of Dublin City Council’s Traffic Control Centre to manage traffic in the city and to improve the priority given to pedestrians, cyclists and public transport in the city.</p>	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MTO34: To manage restrictions on the use of road space for road works or general construction in accordance with Dublin City Council's Directions for the Control and Management of Road Works.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO35: To provide vehicle users with up-to-date and accurate information on traffic conditions and parking availability in the city through use of a range of communications/ media measures.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO36: To review traffic management and calming plans for local areas throughout the city in consultation with local communities and subject to availability of resources.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO37: To assist the NTA in the development of a Regional Traffic Management Strategy in co-operation with neighbouring Local Authorities.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO38: To develop a traffic management and environmental protection plan for sports stadia and significant cultural events in consultation with relevant transport, sporting, community and cultural bodies.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO39: To engage with public transport providers/ agencies and event organisers regarding the feasibility of developing a 'Free Travel' scheme for ticket holders attending major events, concerts, conferences and sporting fixtures in the city.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO40: To review the implementation of the HGV management strategy with a view to developing an improved approach to managing such vehicles in the city.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO41: To review the existing traffic layout of the junction at Doyle's Corner, Phibsborough, during the lifetime of the plan with a view to providing for the needs of vulnerable road users, including pedestrians and cyclists as well as public transport and improving traffic safety.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MTO42: To support the implementation of appropriate speed limits throughout the city in accordance with guidelines published by the Department of Transport, Tourism and sport.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO43: To work with the relevant agencies to ensure that safety issues are addressed at the entrance and exit of Ashtown gates at the Phoenix Park.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
<p>MTO44: To tackle the adverse environmental and road safety impacts of traffic in the city through measures such as:</p> <ul style="list-style-type: none"> • The implementation of traffic calming measures, including the restriction of rat-runs, in appropriate areas in accordance with best practice and following advice contained in the Design Manual for Urban Roads and Streets • The ongoing monitoring of traffic noise and emissions, and the assessment and evaluation of the air quality and traffic noise impacts of transport policy and traffic management measures being implemented by Dublin City Council • The support of the Government's Electric Transport Programme by examining measures that would facilitate the roll-out of charging infrastructure for electric vehicles • To support programmes of action which tackle the issue of road safety in the city • To promote traffic calming in existing residential neighbourhoods through innovative street design and layout such as homezones 	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Objectives) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MTO45: To implement best practice in road design as contained in statutory guidance and in the DMURS (the use of which is mandatory) with a focus on placemaking and permeability (for example, by avoiding long walls alongside roads) in order to create street layouts that are suited to all users, including pedestrians and cyclists	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO46: To promote the greater use of low carbon fuels.	+	+	+	+	0	+	0	0	No potential adverse impacts on EPO
MTO47: To develop a city centre pedestrian network which includes facilities for people with disabilities and/or mobility impairments based on the principles of universal design.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MTO48: To provide on- and off-street disabled driver parking bays in excess of minimum requirements where appropriate (see section 16.38.5).	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO49: To prioritise the introduction of tactile paving, ramps and kerb dishing at appropriate locations, including: pedestrian crossings, taxi ranks, bus stops and rail platforms.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MTO50: To introduce traffic-free areas on sections of Drury Street, South William Street, Exchequer Court and Dame Court and Dame Lane while ensuring that access to car parks and deliveries is still provided for.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Policies) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>MT1: To support the sustainability principles set out in the following documents:</p> <ul style="list-style-type: none"> • The National Spatial Strategy/ National Planning Framework • The National Transport Authority's Transport Strategy for the Greater Dublin Area • Smarter Travel, A Sustainable Transport Future 2009–2020. • Regional Planning Guidelines for the Greater Dublin Area Design Manual for Urban • Roads and Streets (DMURS) • National Cycling Policy Framework and national Cycle Manual <p>Also, to ensure that land-uses and zoning are fully integrated with the provision of a high-quality transportation network that accommodates the movement needs of Dublin city and the region.</p>	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
<p>MT2: Whilst having regard to the necessity for private car usage and the economic benefit to the city centre retail core as well as the city and national economy to continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as cycling, walking and public transport, and to co-operate with the NTA, the NRA, the RPA and other transport agencies in progressing an integrated set of transport objectives. Initiatives contained in the Government's 'Smarter Travel' document and in the NTA's Draft Transport Strategy are key elements of this approach.</p>	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Policies) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MT3: To support and facilitate the development of an integrated public transport network with efficient interchange between transport modes, serving the existing and future needs of the city in association with relevant transport providers, agencies and stakeholders.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MT4: To promote and facilitate the provision of Metro, all heavy elements of the DART Expansion Programme, including: DART Underground (rail interconnector), the electrification of existing lines, the expansion of Luas and improvements to the bus network in order to achieve strategic transport objectives.	+	-/?	+/-	+/-	-	+	-	?	<p>Policies which promote the Metro, Dart Underground expansion of LUAS, etc., will have both positive and negative impacts on the EPOs.. The potential significant adverse impacts, if not mitigated, are as follows:</p> <ul style="list-style-type: none"> a. a) Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short-term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures f. Impacts arising from visual impacts on landscape g. It is recommended that transport infrastructure will require environmental constraints and routing studies.

Chapter 08 (Policies) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MT5: To work with the relevant transport providers, agencies and stakeholders to facilitate the integration of active travel (walking, cycling, etc.) with public transport, thereby making it easier for people to access and use the public transport system.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MT6: i. To work with Iarnród Éireann, the NTA, Transport Infrastructure Ireland (TII) and other operators to progress a co-ordinated approach to improving the rail network, integrated with other public transport modes to ensure maximum public benefit and promoting sustainable transport and improved connectivity. ii. To facilitate the needs of freight transport in accordance with the National Transport Authority's Transport Strategy for the Greater Dublin Area 2016–2035.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MT7: To improve the city's environment for walking and cycling through the implementation of improvements to thoroughfares and junctions and also through the development of new and safe routes, including the provision of foot and cycle bridges. Routes within the network will be planned in conjunction with Green Infrastructure Objectives and on foot of (inter alia) the NTA's Cycle Network Plan for the Greater Dublin Area, and the National Cycle Manual. having regard to policy GI5 and objective GIO18.	+	+/-	+	+	0	+	0	0	Potential for negative impacts on BFF through indirect negative impacts via disturbance and or cumulative impacts.

Chapter 08 (Policies) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MT8: To work with, and actively promote, initiatives by relevant agencies and stakeholders such as An Taisce's 'Green Schools' initiative and the NTAs Smarter Travel Unit, to promote active travel in schools and communities, recognising the health and social benefits of walking and cycling as well as the environmental benefits.	+	0	+	+	0	+	0	0	No potential adverse impacts on EPO
MT9: To promote Bike and Ride at public transport hubs by providing secure, dry, bike parking facilities.	+	0	+	+	0	+	0	+	No potential adverse impacts on EPO
MT10: To provide 30 kmph speed limits and traffic calmed areas at appropriate locations throughout the city and subject to stakeholder consultation.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT11: To continue to promote improved permeability for both cyclists and pedestrians in existing urban areas in line with the National Transport Authority's document 'Permeability – a best practice guide'. Also, to carry out a permeability and accessibility study of appropriate areas in the vicinity of all Luas, Rail and BRT routes and stations, in co-operation with Transport Infrastructure Ireland and the National Transport Authority.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT12: To improve the pedestrian environment and promote the development of a network of pedestrian routes which link residential areas with recreational, educational and employment destinations to create a pedestrian environment that is safe and accessible to all.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT13: To promote best practice mobility management and travel planning to balance car use to capacity and provide for necessary mobility via sustainable transport modes.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Policies) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MT14: To minimise loss of on-street car parking, whilst recognising that some loss of spaces is required for, or in relation to sustainable transport provision, access to new developments, or public realm improvements.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT15: To discourage commuter parking and to ensure adequate but not excessive parking provision for short term shopping, business and leisure uses.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT16: To control the supply and price of all parking in the city in order to achieve sustainable transportation policy objectives.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT17: To provide for sustainable levels of car parking and car storage in residential schemes in accordance with the Plan car parking standards (section 16.38) so as to promote city centre living and reduce the requirement for car parking.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT18: To encourage new ways of addressing the parking needs of residents (such as car clubs) to reduce the requirement for car parking.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT19: To safeguard the residential parking component in mixed use developments	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT20: To increase capacity for public transport, cycling and walking, where required, in order to achieve sustainable transportation policy objectives. Any works undertaken will include as an objective, enhanced provision for safety, public transportation, cyclists and pedestrians, and will be subject to environmental and conservation considerations	+	0	+	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 08 (Policies) Movement and Transport	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
MT21: To improve the management and control of traffic in the city, to increase internal and external sustainable accessibility, to improve road safety, to safeguard commercial servicing requirements, to mitigate the impact of construction works and to minimise the adverse environmental impacts of the transport system.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT22: To require the submission of a Development Assessment for all development proposals located in the vicinity of both Dublin Port Tunnel the proposed DART Underground protected corridor, or any proposed public transport tunnel. Detailed requirements for Dublin Port Tunnel are set out in Appendix 6, and Iarnród Éireann should be consulted in relation to heavy rail.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
MT23: To improve facilities and encourage relevant transport agencies/transport providers to provide for the needs of people with mobility impairment and/or disabilities including the elderly and parents with children.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 09 (Objectives) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SIO1: To support Irish Waste in the implementation of the 'Water Services Strategic Plan – A Plan for the Future of Water Services'.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO2: To work closely with Irish Water to identify and facilitate the timely delivery of the water services required to realise the development objectives of this plan.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO3: To require all new development to provide a separate foul and surface water drainage system and to incorporate sustainable urban drainage systems.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO4: To minimise wastage of water supply by requiring new developments to incorporate water conservation measures, and to promote water conservation by all water users.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO5: To protect existing way leaves and buffer zones around public water services infrastructure.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO6: To implement the European Union Water Framework Directive through the implementation of the appropriate River Basin Management Plan and Programme of Measures.	+	+	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO7: To take into consideration the relevant River Basin Management Plan and Programme of Measures when considering new development proposals.	+	+	+	0	+	0	0	0	No potential adverse impacts on EPO

Chapter 09 (Objectives) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>SIO8: All development Proposals shall carry out to an appropriate level of detail a Site specific Flood Risk Assessment (SSFRA) that shall demonstrate compliance with:</p> <ul style="list-style-type: none"> The Planning System and Flood Risk Management, Guidelines for Planning Authorities, Department of the Environment, Community and Local Government, November 2009, as may be revised/updated and the Strategic Flood Risk Assessment (SFRA) as prepared by this development plan. The site specific flood risk assessment (SSFRA) shall pay particular emphasis to residual flood risks, site specific mitigation measures, flood resilient design and construction, and any necessary management measures (The SFRA and Appendix B4 of the above mentioned national guidelines refers). 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. All potential sources of flood risk must be addressed in the SSFRA. 	+/-	0	+	0	+	0	0	0	Positive long term impacts anticipated with the exception of PH1 as there may be restrictions on the location of development.

Chapter 09 (Objectives) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SIO9: Proposals which may be classed as ‘minor development’, e.g., small scale infill, small extensions to houses or the rebuilding of houses or paving of front gardens to existing houses, most changes of use 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, November 2009 as may be revised/updated, with specific reference to Section 5.28 and in relation to the specific requirements of the Strategic Flood Risk Assessment. The policy shall be not to increase the risk of flooding and to ensure risk to the development is managed.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO10: That recommendations and flood maps arising from the Fingal East Meath CFRAM Study, the Dodder CFRAM Study and the Eastern CFRAM Study are taken into account in relation to the preparation of statutory plans and development proposals. This will include undertaking a review of the Strategic Flood Risk Assessment for Dublin City following the publication of the Final Eastern CFRAM Study, currently being produced by the OPW.	+/-	0	+	0	+	0	0	0	Positive long-term impacts anticipated with the exception of PH as there may be restrictions on the location of development.
SIO11: To work with neighbouring local authorities when developing cross-boundary flood management work programmes and when considering cross-boundary development.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO Cumulative in combination

Chapter 09 (Objectives) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SIO12: To ensure each flood risk management activity is examined to determine actions required to embed and provide for effective climate change adaptation as set out in the Dublin City Council climate change adaptation policy and in the OPW Climate Change Sectoral Adaptation Plan Flood Risk Management applicable at the time.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO13: To provide additional and improved surface water networks to both reduce pollution and allow for sustainable development.	+	+	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO14: To require that any new paving of driveways or other grassed areas is carried out in a sustainable manner so that there is no increase in storm water run-off to the drainage network	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SIO15: To provide for municipal/public recycling and recovery facilities in accessible locations throughout the city.	+	0	0	0	+	0	0	0	No potential adverse impacts on EPO
SIO16: To seek the provision of adequately sized recycling facilities in new commercial and large-scale residential developments where appropriate.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SIO17: To promote the reuse of building materials, recycling of demolition material and the use of materials from renewable sources, In all developments in excess of 10 housing units and commercial developments in excess of 1000 sq.m, a materials source and management plan showing type of materials/proportion of reuse/recycled materials to be used shall be implemented by the developer.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SIO18: To implement the current Litter Management Plan through enforcement of the litter laws, street cleaning and education and awareness campaigns	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 09 (Objectives) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SIO19: To implement the Eastern-Midlands Waste Management Plan 2015–2021 and achieve the plan targets and objectives	+	0	0	+	0	+	0	0	No potential adverse impacts on EPO
SIO20: To promote sustainable design and construction to help reduce emissions from the demolition and construction of buildings.	+	0	0	+	0	+	0	0	No potential adverse impacts on EPO
SIO21: To encourage the use of internal ducting/staircores within all new mixed use developments where appropriate to facilitate air extraction/ventilation units and other associated plant and services.	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO
SIO22: To maintain and manage a Dublin ambient air quality monitoring network and to make available to the public the resulting air quality measurements.	+	0	+	+	0	0	0	0	No potential adverse impacts on EPO
SIO23: To implement the Dublin Agglomeration Noise Action Plan (2008–2018) in co-operation with the other local authorities in Dublin and the Irish Aviation Authority.	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO
SIO24: To protect the designated 'Quiet Areas' within the city from increased exposure to noise.	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO
SIO25: To support new technologies and practices as a power source in transport to reduce noise.	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO
SIO26: To protect residents of mixed use developments from noise emanating from other uses such as shops, offices, nightclubs, late night busking, public houses and other night-time uses through the Planning System.	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO
SIO27: To give careful consideration to the location of noise sensitive developments so as to ensure they are protected from major noise sources where practical.	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO
SIO28: To support and facilitate the monitoring and enforcement by the environmental health department of noise reduction measures in areas experiencing excess noise.	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO

Chapter 09 (Objectives) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SIO29: To take cognisance of the Dublin Agglomeration Environmental Noise Action Plan 2013–2018 during the development and implementation of any policies for the city and before any major planning developments commence within Dublin	+	0	0	+	0	0	0	0	No potential adverse impacts on EPO
SIO30: To avoid a proliferation of communications masts and antennae and facilitate the potential for future mast sharing and co-location.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SIO31: To support the emerging Smart Dublin Framework, which will allow greater flexibility for the city to work with universities, entrepreneurs and companies to co-innovate, test and deploy new urban solutions.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SIO32: To support the installation of high speed technologies, where practicable, in accordance with the Department of Communications, Climate Action and Environment documents, including: Recommendations for Open Access Fibre Ducting and Interior Cabling for New Residential Buildings, Making Home Fibre Ready, 2011, the National Broadband Plan 2012 – Delivering a connected Society and National Digital Strategy for Ireland 2013, Doing more with Digital – Phase 1 Digital Engagement.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SIO33: To support the development of energy efficient initiatives such as use of District Heating and Combined Heat and Power, and to promote the use of CHP in large developments.	+	0	+	+/-	0	+	0	0	Potential negative impacts on noise and air quality

Chapter 09 (Policies) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SI1: To support and facilitate Irish Water, in the provision of high quality drinking water, water conservation, and in the development and improvement of the water and wastewater systems to meet anticipated demands for clean and resilient water supplies and wastewater requirements for the city and region, all in accordance with the recommendations set out in the 'Greater Dublin Water Supply Strategic Study' and 'The Greater Dublin Strategic Drainage Study.	+	+/-	+	0	+	+	0	0	This is a positive policy as there is a critical capacity issue in Dublin city. Construction impacts could have potential impacts on BFF1, however, policy SI3 makes in conditional that sufficient capacity be delivered before permission for development is granted.
SI2: To support and facilitate Irish Water to ensure the upgrading of wastewater infrastructure, in particular, the upgrading of the Ringsend Wastewater Treatment Plan, and to support the development of the Greater Dublin Regional Wastewater Treatment Plant, the Marine Outfall and orbital sewer to be located in the northern part of the Greater Dublin Area to serve the Dublin region as part of the Greater Dublin Strategic Drainage Strategy.	+	+/-	+	0	+	+	0	0	Construction impacts could have potential impacts on BFF1, however, policy SI3 makes in conditional that sufficient capacity be delivered before permission for development is granted
SI3: 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 exists or will become available within the life of a planning permission.	+	+	+	0	++	+	0	0	No potential adverse impacts on EPO
SI4: To promote and maintain the achievement of at least good status in all water bodies in the city.	+	+	0	0	+	0	0	+	SEA: Policy should refer to 'maintain' good status also.
SI5: To promote the enhancement of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems.	+	+	0	0	+	0	0	+	No potential adverse impacts on EPO

Chapter 09 (Policies) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SI6: To promote the protection and improvement of the aquatic environment, including through specific measures for the progressive reduction or cessation of discharges and emissions.	+	+	+	0	+	0	0	+	No potential adverse impacts on EPO
SI7: To promote the progressive reduction of pollution of groundwater and prevent its further pollution.	+	+	0	0	+	0	0	+	No potential adverse impacts on EPO
SI8: To mitigate the effects of floods and droughts, subject to Environmental Assessment.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SI9: To assist the Office of Public Works in developing catchment based Flood Risk Management Plans for rivers, coastlines and estuaries in the Dublin city area and have regard to their provisions/ recommendations.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SI10: To have regard to the Guidelines for Planning Authorities on the Planning System and Flood Risk Management, and Technical Appendices, November 2009, published by the Department of the Environment, Community, and Local Government as may be revised/ updated when assessing planning applications and in the preparation of plans both statutory and non-statutory.	+	+	+	0	+	0	0	0	No potential adverse impacts on EPO
SI11: To put in place adequate measures to protect the integrity of the existing Flood Defence Infrastructure in Dublin City Councils ownership and identified in the Strategic Flood Risk Assessment and to ensure that the new developments do not have the effect of reducing the effectiveness or integrity of any existing or new flood defence infrastructure and that flood defence infrastructure has regard also to nature conservation, open space and amenity issues.	+	+	+	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 09 (Policies) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SI12: To implement and comply fully with the recommendations of the Strategic Flood Risk Assessment prepared as part of the Dublin City Development Plan.	+/-	+	+	0	+	0	0	0	Positive long-term impacts anticipated with the exception of PH1 as there may be restrictions on the location of development.
SI13: Development of basements or any above ground buildings for residential use below the estimated flood levels for Zone A or Zone B will not be permitted.	+	0	+	0	0	0	0	0	No potential adverse impacts on EPO
SI14: To protect the Dublin City coastline from flooding as far as reasonably practicable, by implementing the recommendations of the Dublin Coastal Flood Protection Project and the Dublin Safer Project.	+	0	+	0	+	0	0	0	No potential adverse impacts on EPO
SI15: To minimise the risk of pluvial (intense rainfall) flooding in the city as far as is reasonably practicable and not to allow any development which would increase this risk.	+	+	+	0	+	0	0	0	No potential adverse impacts on EPO
SI16: To minimise the flood risk in Dublin city from all other sources of flooding, including fluvial, reservoirs and dams and the piped water system.	+	+	+	0	+	0	0	0	No potential adverse impacts on EPO
SI17: To require an environmental assessment of all proposed flood protection or flood alleviation works.	+	+	0	0	+	0	0	0	No potential adverse impacts on EPO
SI18: To require the use of Sustainable Urban Drainage Systems in all new developments, where appropriate, as set out in the Greater Dublin Regional Code of Practice for Drainage Works. The following measures will apply: <ul style="list-style-type: none"> The infiltration into the ground through the development of porous pavement such as permeable paving, swales, detention basins. The holding of water in storage areas through the construction of green roofs, rainwater harvesting, detention basins, ponds, wetlands. The slow down of the movement of water. 	+	+	+	0	+	0	0	+	No potential adverse impacts on EPO

Chapter 09 (Policies) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SI19: To support the principles of good waste management and the implementation of best international practice in relation to waste management in order for Dublin city and the region to become self-reliant in terms of waste management.	+	0	0	0	+	+	0	+	No potential adverse impacts on EPO
SI20: To prevent and minimise waste and to encourage and support material sorting and recycling.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SI21: To minimise the amount of waste which cannot be prevented and ensure it is managed and treated without causing environmental pollution.	+	+	0	0	+	+	0	+	No potential adverse impacts on EPO
SI22: To ensure that effect is given as far as possible to the 'polluter pays' principle.	+	0	0	0	+	0	0	+	No potential adverse impacts on EPO
SI23: 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).	+	+	0	0	+	0	0	+	No potential adverse impacts on EPO
SI24: To monitor and improve air quality in accordance with national and EU policy directives on air quality and where appropriate promote compliance with established targets.	+	+	+	+	0	0	0	0	No potential adverse impacts on EPO
SI25: To seek to preserve and maintain air and noise quality in the city in accordance with good practice and relevant legislation.	+	+	+	+	0	0	0	0	No potential adverse impacts on EPO
SI26: To ensure that the design of external lighting proposals minimises light spillage or pollution in the surrounding environment and has due regard to the residential amenity of the surrounding area.	+	+	0	+	0	0	0	+	No potential adverse impacts on EPO
SI27: To require lighting design to be appropriate to the end use in relation to residential areas, footpaths, cycle paths, urban streets and highways, i.e., use of low-level bollard lighting along cycle paths.	+	0	0	0	0	0	0	+	No potential adverse impacts on EPO

Chapter 09 (Policies) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SI28: To have regard to the provisions of the Major Accidents Directive' (2012/18/EU), relating 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. 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 such sites.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SI29: To encourage and facilitate telecommunications infrastructure in appropriate locations throughout the city as a means of improving economic competitiveness and contributing to sustainable movement by reducing the need to travel through enabling e-working, e-commerce and distance learning.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SI30: To support and facilitate the delivery of a high capacity ICT infrastructure, broadband networks, and digital broadcasting in the city, having regard to the Governments Guidelines Telecommunications Antenna and Support Structures – Guidelines for Planning Authorities, 1996 (DEHLG) and Circular Letter PLO 07/12 (including any updated /superseding documents) and where it can be demonstrated that development will not have significant adverse effects on the environment.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 09 (Policies) Sustainable Environmental Infrastructure	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>SI31: To support and facilitate the development of enhanced electricity and gas supplies, and associated networks, to serve the existing and future needs of the city, and facilitate new transmission infrastructure projects that might be brought forward in the lifetime of this plan, subject to relevant Irish planning and European legislation, including Article 6 of the Habitats Directive and/or environmental assessment.</p>	+	?	0	0	0	+	0/-	0/-	<p>The provision of energy infrastructure in Dublin city should ensure that suitable locations are identified and cumulative impacts on the environment are addressed.</p> <p>All energy development can have potential direct negative impacts on the natural environment and could impact on cultural heritage and sensitive landscapes.</p> <p>Should be subject to necessary environmental studies, including screening for Appropriate Assessment.</p>
<p>SI32: 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.</p>	+	0	0	0	0	+	0	+	No potential adverse impacts on EPO

Chapter 10 (Objectives) Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GIO1: To integrate green infrastructure solutions into new developments and as part of the development of a Green Infrastructure Strategy for the city.	+	+	+	0	0	0	0	+	No potential adverse impacts on EPO
GIO2: To apply principles of green infrastructure development to inform the development management process in terms of design and layout of new residential areas, business/industrial development and other significant projects.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GIO3: To focus on key streets in the city area between the canals for 'greening' by way of higher standards of planting and amenity along key routes.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GIO4: To improve pedestrian and cycle access routes to strategic level amenities while ensuring that ecosystem functions and existing amenity uses are not compromised and existing biodiversity and heritage is protected and enhanced.	+	+/-	0	0	0	0	0	+	Potential for negative impacts on BFF through indirect negative impacts via disturbance and or cumulative impacts.
GIO5: To engage with and involve corporate volunteers, landowners and relevant agencies to support their communities in the development and delivery of green infrastructure programmes.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GIO6: To prepare a Landscape Character Assessment (LCA) for Dublin city during the lifetime of the plan in accordance with the National Landscape Strategy and forthcoming national methodology.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GIO7: To promote the city landscapes, including rivers, canals and Dublin Bay, as a major resource for the city and forming core areas of green infrastructure network.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GIO8: To undertake a 'Views and Prospects' study to identify and protect the key views and prospects of the city. Additional views and prospects may be identified through the development management process and local area plans.	+	0	0	0	0	0	0	+	No potential adverse impacts on EPO

Chapter 10 (Objectives) Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GIO9: To maximise managed access to key landscape and amenity areas of Dublin city.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GIO10: (i) To support the provision of community gardens/allotments/ local markets/pocket parks, where feasible, and, in particular, as temporary uses on vacant, under-utilised or derelict sites in the city. (ii) To support proposals for site allotments on the site of the Old Community Centre Bluebell while also retaining the hall building.	+	+	0	0	0	+	0	0	No potential adverse impacts on EPO
GIO11: To support the implementation of the Dublin City Council Parks Strategy.	+	+	0	0	+	0	0	+	No potential adverse impacts on EPO
GIO12: To improve visitor facilities, including: cafes, toilet, shower and changing room facilities, based on the recommendations of the Parks Strategy.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GIO13: To implement Conservation Plans for: Merrion Square, Mountjoy Square, Palmerston Park, Herbert Park and Sandymount Green and Wolfe Tone Park.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO14: i. To seek the designation of Liffey Valley (from Islandbridge to the city boundary), Sandymount and Merrion Strands, the Phoenix Park and also Irishtown Nature Park as Special Amenity Areas and to prepare Special Amenity Area Orders (SAAOs) for same. ii. To protect and conserve the historic landscape of the Phoenix Park and it's archaeological, architectural and natural heritage whilst facilitating visitor access, education and interpretation, facilitating the sustainable use of the park's resources for recreation and other appropriate activities, encouraging research and maintaining its sense of peace and tranquillity.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO

Chapter 10 (Objectives) Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GIO15: To seek to expand Mount Bernard Park northwards to the Royal Canal, with a bridge connecting with the Green Way.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO16: To promote and actively pursue the development of a park in the area known as Scully's Field between Clonskeagh and Milltown.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO17: To seek the continued improvement of water quality, bathing facilities and other recreational opportunities in the coastal, estuarine and surface waters in the city and to protect the ecology and wildlife of Dublin Bay.	+	0	0	0	+	0	0	0	No potential adverse impacts on EPO
GIO18: To protect and improve the natural character of watercourses, including: the Dodder, and to promote access, walkways, cycleways and other compatible recreational uses along them, having regard to environmental sensitivities.	+	+/-	0	0	+	0	0	0	Potential disturbance to habitats bringing additional people to these areas and fragmentation of habitats from increased cycleways/walkways
GIO19: To maintain beaches at Dollymount, Sandymount, Merrion and Poolbeg/Shelly Banks to a high standard, and to develop their recreational potential as a seaside amenity, in order to bring them to 'Blue Flag' standard subject to Article 6 Assessment of the Habitats Directive.	+	+	0	0	+	0	0	0	No potential adverse impacts on EPO
GIO20: To establish, where feasible, river corridors, free from development, along all significant watercourses in the city.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 10 (Objectives) Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GIO21: To co-operate with the relevant adjoining local authorities of Dún Laoghaire-Rathdown and South Dublin Councils in developing a strategy for the preparation and graduated implementation of an integrated Maintenance, Improvement and Environmental Management Plan for the entire length of the river Dodder and to support the establishment of a co-ordinating river Dodder Authority or equivalent body to implement that strategy. This plan should reflect the relevant recommendations of the Eastern Catchment Flood Risk Assessment and Management and associated Unit of Measurement Flood Risk Management Plan(s) and associated Environmental Reports.	+	+	0	0	+	0	0	0	No potential adverse impacts on EPO
GIO22: To promote and upgrade visitor facilities at North Bull Island to raise awareness of biodiversity and promote nature conservation and manage recreation sustainably, having regard to Article (6) of the Habitats Directive.	+	+/-	0	0	0	0	0	0	Potential disturbance to habitats bringing additional people to these areas.
GIO23: To support the implementation of the 'Dublin City Biodiversity Action Plan 2015-2019', including inter alia (a) the conservation of priority species, habitats and natural heritage features, and (b) the protection of designated sites.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO24: To develop Biosecurity Codes of Practice to deal with invasive species and ensure compliance with EU (Birds and Natural Habitats) Regulations 2011 and EU Regulations 2014 on the prevention and management of the introduction and spread of invasive alien species.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 10 (Objectives) Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GIO25: To protect trees in accordance with existing Tree Preservation Orders (TPOs) and, subject to resources, explore the allocation of additional TPOs for important/special trees within the city based on their contribution to amenity or the environment.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GIO26: To review ancient and species-rich hedgerows within the city (as identified in the 2006 survey of ancient and species-rich hedgerows in Dublin city) and protect existing hedgerow sections.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GIO27: To protect trees, hedgerows or groups of trees which function as wildlife corridors or 'stepping stones' in accordance with Article 10 of the EU Habitats Directive.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GIO28: To identify opportunities for new tree planting to ensure continued regeneration of tree cover across the city, taking account of the context within which a tree is to be planted and planting appropriate tree species for the location.	+	+	+	0	0	0	0	0	No potential adverse impacts on EPO
GIO29: To encourage trees to be incorporated in (a) the provision of temporary green spaces (e.g. pop-up parks) either planted into the soil or within moveable containers as appropriate and (b) within sustainable urban drainage systems (SUDS), as appropriate.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GIO30: To support the implementation of the Dublin City Play Plan 2012–2017, which aims to provide inclusive and accessible play opportunities for children and young people.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO31: To encourage and facilitate the introduction of amenities in parks such as table tennis, games tables, outdoor gyms, adult exercise equipments, bowling greens, etc.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO32: To endeavour to provide play spaces in every neighbourhood in the city, which are open to public use.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 10 (Objectives) Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GIO33: To involve children and young people in green initiatives and biodiversity projects, having regard to their need to interact with and be educated by nature.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO34: To examine the possibility of using suitable undeveloped land temporarily as informal recreational space.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO35: To examine under-used and disused laneways and back streets in the city centre and investigate the possibility of promoting activities; regard being given to the amenity of residents in the vicinity.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO36: To endeavour to provide a multi-purpose sports facility for residents of the south west inner city.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO37: To provide additional sports facilities for young people in the Ringsend/Irishtown area.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO38: To redevelop Dalymount Park soccer stadium providing enhanced sporting recreational and community amenities and as part of this development to celebrate the rich sporting history of this site.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
GIO39: To seek the provision of a fit for purpose public park solely designed around children and all their play needs. That this park would have at its centre inclusiveness and be built and designed in such a way as to not be a hindrance to any child with a disability and that this park be centred within the city core and be a lasting legacy to the principal of cherishing all the children of the nation equally	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 10 (Policies) Green Infrastructure, Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GI1: To develop a green infrastructure network through the city, thereby interconnecting strategic natural and semi-natural areas with other environmental features including green spaces, rivers, canals and other physical features in terrestrial (including coastal) and marine areas.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GI2: That any plan/project, either individually or in combination with other plans or projects that has the potential to give rise to significant effect on the integrity of any European site(s), shall be subject to an appropriate assessment in accordance with Article 6(3) and 6(4) of the EU Habitats Directives.	+	++	0	0	+	+	0	0	No potential adverse impacts on EPO
GI3: To develop linear parks, particularly along waterways, and to link existing parks and open spaces in order to provide green chains throughout the city. Where lands along the waterways are in private ownership, it shall be policy in any development proposal to secure public access along the waterway.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GI4: To co-ordinate open space, biodiversity and flood management requirements, in progressing a green infrastructure network.	+	+	+	0	+	0	0	+	No potential adverse impacts on EPO
GI5: To promote permeability through our green infrastructure for pedestrians and cyclists.	+	+	+	+	+	0	0	+	No potential adverse impacts on EPO
GI6: To support and implement the objectives of the National Landscape Strategy.	+	+	+	+	+	0	0	+	No potential adverse impacts on EPO
GI7: To continue to protect and enhance landscape, including existing green spaces through sustainable planning and design for both existing community and for future generations in accordance with the principles of the European Landscape Convention.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO

Chapter 10 (Policies) Green Infrastructure, Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GI8: To protect and enhance views and prospects which contribute to the appreciation of landscape and natural heritage.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GI9: To incorporate open space into the green infrastructure network for the city, providing a multifunctional role, including: urban drainage, flood management, biodiversity, outdoor recreation and carbon absorption.	+	+	+	+	+	0	0	+	No potential adverse impacts on EPO
GI10: To continue to manage and protect and/or enhance public open spaces to meet the social, recreational, conservation and ecological needs of the city and to consider the development of appropriate complementary facilities which do not detract from the amenities of spaces.	+	+	+	0	0	0	0	+	No potential adverse impacts on EPO
GI11: To seek the provision of additional spaces in areas deficient in public open spaces – by way of pocket parks or the development of institutional lands.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GI12: To ensure equality of access for all citizens to the public parks and open spaces in Dublin city and to promote more open space with increased accessibility and passive surveillance where feasible, in this regard the 'Fields in Trust' benchmark for green/recreational space city wide shall be a policy goal and quality standards.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
GI13: To ensure that in new residential developments, public open space is provided which is sufficient in quantity and distribution to meet the requirements of the projected population, including play facilities for children.	+	+	0	+	0	0	0	+	No potential adverse impacts on EPO
GI14: To promote the development of soft landscaping in public open spaces, where feasible, in accordance with the principles of Sustainable Urban Drainage Systems	+	+	0	+	+	0	0	+	No potential adverse impacts on EPO

Chapter 10 (Policies) Green Infrastructure, Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GI15: To protect, maintain, and enhance the natural and organic character of the watercourses in the city, including opening up to daylight where safe and feasible. The creation and/or enhancement of riparian buffer zones will be required where possible. It is the policy of Dublin City Council to maintain and enhance the safety of the public in its use and enjoyment of the many public parks, open spaces, waterways and linkages within the city, including: the river Dodder between Ringsend and Orwell (Waldrons) bridge, and at the area known as Scully's Field between Clonskeagh and Milltown.	+	+	+	+	+	0	0	+	No potential adverse impacts on EPO
GI16: To protect and improve the unique natural character and ecological value of all rivers within and forming boundaries to the administrative area of Dublin City Council, in accordance with the Eastern River Basin District management plan.	+	+	0	0	+	0	0	+	No potential adverse impacts on EPO
GI17: To develop sustainable coastal, estuarine, canal and riverine recreational amenities to enhance appreciation of coastal natural assets in a manner that ensures that any adverse environmental effects are avoided, remedied or mitigated.	+	0/-	0	0	0	0	0	0	.Potential cumulative /in combination impacts Potential for negative impacts on BFF through indirect negative impacts via disturbance and or cumulative impacts.
GI18: To liaise with relevant State agencies responsible for the city's waterways, including: Waterways Ireland, Inland Fisheries Ireland, the Environmental Protection Agency and Dublin Port Company.	+	0	0	0	0	0	0	+	No potential adverse impacts on EPO
GI19: To ensure a co-ordinated approach to the management of Dublin Bay with other State and semi- State agencies through the Dublin Bay Biosphere Partnership to develop a Biosphere Strategy for the sustainable development of Dublin Bay.	+	+	0	0	0	0	0	+	Potential cumulative /in combination impacts

Chapter 10 (Policies) Green Infrastructure, Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GI20: To seek continued improvement in water quality, bathing facilities and other recreational opportunities in the coastal, estuarine and surface waters in the city, having regard to the sensitivities of Dublin Bay and to protect the ecology and wildlife of Dublin Bay.	+	+	+	0	+	0	0	+	No potential adverse impacts on EPO
GI21: To support initiatives to reduce marine pollution in Dublin Bay in partnership with other organisations and to raise awareness by Bay users and the general public and also to have regard to the Marine Strategy Framework Directive (2008/56/EC).	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GI22: To promote nature conservation of Dublin Bay by improving information and interpretation of its biodiversity for recreational users and visitors.	+	+	0	0	0	0	0	+	No potential adverse impacts on EPO
GI23: To protect flora, fauna and habitats, which have been identified by Articles 10 and 12 of Habitats Directive, Birds Directive, Wildlife Acts 1976–2012, the Flora (Protection) Order 2015 S.I No. 356 of 2015, European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.	+	+	0	+	+	0	0	+	No potential adverse impacts on EPO
GI24: To conserve and manage all Natural Heritage Areas, Special Areas of Conservation and Special Protection Areas designated, or proposed to be designated, by the Department of Arts, Heritage, Regional, Rural and the Gaeltacht Affairs.	+	+	0	+	0	0	0	+	No potential adverse impacts on EPO
GI25: To make provisions for habitat creation/ maintenance and facilitate biodiversity by encouraging the development of linear parks, nature trails, wildlife corridors, urban meadows and urban woodlands.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO

Chapter 10 (Policies) Green Infrastructure, Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GI26: To have regard to the conservation and enhancement of significant non-designated areas of ecological importance in accordance with development standards set out in this plan.	+	+	0	0	+	0	0	+	No potential adverse impacts on EPO
GI27: To minimise the environmental impact of external lighting at sensitive locations to achieve a sustainable balance between the needs of an area, the safety of walking and cycling routes and the protection of light sensitive species such as bats.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GI28: To support the implementation of the Dublin City Tree Strategy, which provides the vision for the long-term planting, protection and maintenance of trees, hedgerows and woodlands within Dublin city.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO
GI29: To adopt a pro-active and systematic good practice approach to tree management with the aim of promoting good tree health, condition, diversity, public amenity and a balanced age profile.	+	+	0	0	0	0	0	0	No potential adverse impacts on EPO
GI30: To encourage and promote tree planting in the planning and development of urban spaces, streets, roads and infrastructure projects.	+	+	+	+	0	0	0	+	No potential adverse impacts on EPO

Chapter 10 (Policies) Green Infrastructure, Open Space and Recreation	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
GI31: To improve on existing sports/recreational facilities in the city through the implementation of the Dublin City Sport and Active Recreation Strategy 2009–2016 and to ensure the availability of a range of recreational facilities to the general population of all ages and groups at locations throughout the city, including ice-skating. In areas where a deficiency exists, Dublin City Council will work with the providers of such facilities, including schools, institutions and private operators, to ensure access to the local population.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
GI32: To support the development of private recreational lands for recreational purposes.	+	+	0	+	0	0	0	0	No potential adverse impacts on EPO
GI33: To seek the provision of children’s play facilities in new residential developments. To provide playgrounds to an appropriate standard of amenity, safety, and accessibility and to create safe and accessible places for socialising and informal play.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 11 (Objectives) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHCO1: To undertake a survey and review of the Record of Protected Structures (RPS) within the identified phase 1 priority areas (as set out in section 11.1.4 The Strategic Approach) of special historic and architectural interest, as part of the ongoing strategic management of the RPS.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO2: To designate further Architectural Conservation Areas within the identified phase 1 priority areas (as set out in section 11.1.4 The Strategic Approach) of special historic and architectural interest. Phase 2 of the survey and review, based on the rationale set out in subsection 11.1.4 (bullet point 1), will include; areas adjacent to phase 1 priority areas; extension of the Thomas Street ACA; Pembroke Estate/Rathmines Lower and Upper/Belgrave Square; Stoneybatter/Oxmanstown/Arbour Hill, Ranelagh Village.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO3: To review and consider the recommendations of the National Inventory of Architectural Heritage as part of the conservation strategy to review the Record of Protected Structures and to designate Architectural Conservation Areas within the identified phase 1 priority areas (as set out in section 11.1.4 The Strategic Approach) of special historic and architectural interest. Consideration will also be given to the inclusion of industrial heritage structures of special interest.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Objectives) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHCO4: To review the zoning objectives and the red-lined hatched conservation designations as part of the conservation strategy to review the Record of Protected Structures and to designate Architectural Conservation Areas within the identified phase 1 priority areas (as set out in section 11.1.4 The Strategic Approach) of special historic and architectural interest. Consideration will also be given to the inclusion of industrial heritage structures of special interest.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO5: To continue the compilation of the database of the Record of Protected Structures and Architectural Conservation Areas.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO6: To provide guidance for owners of protected structures or historic buildings on upgrading for energy efficiency and to promote the principles of sustainable building design in conservation.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO7: To maintain a register of buildings at risk in which protected structures at risk from neglect or wilful damage will be entered and actions may be taken to ensure their survival.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO8: To prepare schemes for Areas of Special Planning Control, where deemed desirable and appropriate, having regard to statutory needs of the city.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO9 Bewley's Oriental Café at No. 78/79 Grafton Street is deemed to be a use that contributes significantly to the special and unique character of Grafton Street and, as such is considered an essential part of the street. It is an objective, in accordance with the Scheme of Special Planning Control for Grafton Street and Environs, to protect the use of the entire building as a café, which is intrinsic to the special character of the building.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Objectives) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHCO10:	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
1. To implement the archaeological actions of the Dublin City Heritage Plan 2002–6 in light of the Dublin City Heritage Plan Review 2012.									
2. To prepare and implement conservation plans for National Monuments and Monuments in DCC care (City Walls, St Luke's Church, St James's Graveyard, St Thomas's Abbey, St Canice's Graveyard, etc.).									
3. To maintain, develop and promote the Dublin City Archaeological Archive (DCAA) at Pearse Street Library and Archives.									
4. To ensure the public dissemination of the findings of licensed archaeological activity in Dublin through the Dublin County Archaeology GIS.									
5. To develop a long-term management plan to promote the conservation, management and interpretation of archaeological sites and monuments and to identify areas for strategic research.									
6. To have regard to the city's industrial heritage and Dublin City Industrial Heritage Record (DCIHR) in the preparation of Local Area Plans (LAPs) and the assessment of planning applications and to publish the DCIHR online. To review the DCIHR in accordance with Ministerial recommendations arising from the national Inventory of Architectural Heritage (NIAH) survey of Dublin City and in accordance with the Strategic Approach set out in Section 11.1.4 of this chapter.									

Chapter 11 (Objectives) Culture and Heritage		PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
7.	To promote awareness of, and access to, the city's archaeological inheritance and foster high-quality public archaeology.									
8.	To promote archaeological best practice in Dublin city.									
9.	To promote the awareness of the international significance of Viking Dublin and to support post-excavation research into the Wood Quay excavations 1962–1981.									
10.	10. To develop a strategy for the former Civic Museum collection and for other collections of civic interest and importance.									
11.	To investigate the potential for the erection of Columbarium Walls.									
12.	To support the implementation of the Kilmainham Mill Conservation Plan.									
13.	Dublin City Council will seek to work with Diageo to undertake a more comprehensive industrial heritage survey of the constituent historic buildings within the Guinness Brewery complex at Saint James's Gate									
14.	To implement and promote The Dublin Principles (ICOMOS, 2011) as guiding principles to assist in the documentation, protection, conservation and appreciation of industrial heritage as part of the heritage of Dublin and Ireland.									
15.	To continue to implement actions of the Saint Luke's Conservation Plan on the basis of funds available to conserve the monument, recover the graveyard, provide visitor access, improve visual amenity and secure an appropriate new use.									

Chapter 11 (Objectives) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHCO11: To continue to review and implement the Dublin City Heritage Plan. To publish the Dublin City Heritage Plan in 2017 based on the consultative process undertaken in 2012.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO12: To implement the signage strategy for the city walls.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO13: To undertake specific priority conservation works projects and to seek to identify additional national grant mechanisms to aid in the implementation of such projects.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO14: To co-operate with other agencies in the investigation of climate change on the fabric of historic buildings in the city.	+	0	+	0	0	0	+	0	No potential adverse impacts on EPO
CHCO15: To commemorate and appropriately celebrate the centenary of historic events, including the 1916 Rebellion and other commemorative events associated with Irish Independence.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO16: To undertake a feasibility study to identify suitable uses, potential partners, funding opportunities and a conservation strategy to secure the conservation, future use and appropriate development of the former Pigeon House hotel and former Pigeon House Power Station for the benefit of the city of Dublin. Provide further reports to the Area Committee on the technical appraisal being carried out by ESB in relation to the Poolbeg chimneys, which are iconic features of the Dublin skyline and of the industrial heritage of Dublin.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO17: To undertake a feasibility study for the development of a museum of urban social history in Dublin based around utilising and exhibiting the Dublin Civic Museum collection and the Dublin Tenement Museum at 14 Henrietta Street museum.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Objectives) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHCO18: To develop a strategy for collection of oral history and folklore in Dublin city in conjunction with the Irish Folklore Foundation, under the Dublin City Heritage Plan.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO19: To promote the Liberties as an area of historical, archaeological, industrial and cultural heritage in Dublin city through authentic exhibits, improving access to cultural heritage sites and fostering engagement through community archaeology and heritage projects	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO20: To facilitate the growth and continued development of cultural life in the city by supporting the implementation of Dublin City Council's Cultural Strategy 2015–2021.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO21To support a range of cultural initiatives and facilitate the provision of a broad range of cultural facilities reflecting the city's diverse ethnic populations.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO22: The City Council will conduct cultural audits (qualitative and quantitative) in all city areas paying particular attention to developing cultural clusters.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO23: The City Arts Office will continue to develop its role as broker between the owners of vacant premises/properties and artists seeking temporary accommodation, with the assistance of and in conjunction with the active land management role of the City's Planning and Property Development Department.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO24: To ensure that fit-for-purpose, accessible, cultural facilities are considered as part of larger developments in the city, having regard to Dublin City Council's Cultural Needs Analysis.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Objectives) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHCO25: To encourage and facilitate the provision of affordable live-work units and studios/ cultural spaces for artists as part of larger residential and mixed use developments.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO26: To support and facilitate the change of use of vacant commercial units to publicly accessible cultural work spaces, performance venues, art galleries, etc., on a temporary basis through the development management process.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO27: To support the cultural development of those cultural quarters, including the North Georgian city and O'Connell Street Quarter and the Heuston/Royal Hospital Quarter and promote linkage to the historic village area of Kilmainham/Inchicore (including industrial heritage sites such as the old mill at Rowerstown Lane, Bluebell), focusing on underutilised amenity resources, increased permeability, and encouraging a vibrant area in which to work and live while having regard to the grain and historic character of these areas.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO28: To discourage an over-concentration of large public houses in any particular area to ensure a balanced mix of cultural uses, including: venues for live music, theatre, film and dance, whilst protecting the residential amenities of city centre residents.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO29: To continue to animate the public domain by facilitating and supporting the delivery of an annual events programme by Dublin City Council in collaboration with key event and festival partners, whilst protecting the residential amenities of the surrounding area.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Objectives) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHCO30: To seek to provide a 'revolutionary' or 'green' trail in the city, linking sites such as Boland's Mills, GPO, Moore Street, Dublin Castle, Kilmainham Jail, Richmond Barracks, Mount Street Bridge, the Mendicity Institute, Arbour Hill, The Four Courts, Annesley Bridge and North King Street similar to that in Boston, which can be a significant tourist attraction.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO31: To develop a 1916 Historic Quarter, including Moore Street, with its National Monument and historic terrace, an appropriately developed street market, the GPO and Parnell Square, creating an integrated historic, literary and commercial focus for the north city centre and providing potential for tourism and to prepare a Development Brief for the Moore Street Area which addresses the above.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHCO32: To promote and facilitate the development of a mixed-use cultural facility in Parnell Square anchored by a new city library, stimulating the regeneration of the north inner city.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CHC1: To seek the preservation of the built heritage of the city that makes a positive contribution to the character, appearance and quality of local streetscapes and the sustainable development of the city.</p>	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
<p>CHC2: To ensure that the special interest of protected structures is protected. Development will conserve and enhance Protected Structures and their curtilage and will:</p> <p>a. Protect or, where appropriate, restore form, features and fabric which contribute to the special interest.</p> <p>b. Incorporate high standards of craftsmanship and relate sensitively to the scale, proportions, design, period and architectural detail of the original building, using traditional materials in most circumstances.</p> <p>c. Be highly sensitive to the historic fabric and special interest of the interior, including its plan form, hierarchy of spaces, structure and architectural detail, fixtures and fittings and materials.</p> <p>d. Not cause harm to the curtilage of the structure; therefore, the design, form, scale, height, proportions, siting and materials of new development should relate to and complement the special character of the protected structure.</p> <p>e. Protect architectural items of interest from damage or theft while buildings are empty or during course of works.</p> <p>f. Have regard to ecological considerations, e.g., protection of species such as bats.</p> <p>Changes of use of protected structures, which will have no detrimental impact on the special interest and are compatible with their future long-term conservation, will be promoted.</p>	+	+	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CHC3: To identify and protect exceptional buildings of the late twentieth century; to categorise, prioritise and where appropriate, add to the RPS. Dublin City Council will produce guidelines and offer advice for protection and appropriate refurbishment.</p>	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
<p>CHC4: To protect the special interest and character of all Dublin's Conservation Areas (11.1.5.4). Development within or affecting all conservation areas will contribute positively to the character and distinctiveness; and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible.</p> <p>Enhancement opportunities may include:</p> <ol style="list-style-type: none"> 1. Replacement or improvement of any building, feature or element which detracts from the character of the area or its setting 2. Re-instatement of missing architectural detail or other important features. 3. Improvement of open spaces and the wider public realm, and re-instatement of historic routes and characteristic plot patterns. 4. Contemporary architecture of exceptional design quality, which is in harmony with the Conservation Area. 5. The repair and retention of shop and pub fronts of architectural interest. 	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CHC4: (Continued) Development will not:</p> <ol style="list-style-type: none"> Harm buildings, spaces, original street patterns or other features which contribute positively to the special interest of the conservation area. Involve the loss of traditional, historic or important building forms, features, and detailing, including: roofscapes, shop fronts, doors, windows and other decorative detail. Introduce design details and materials, such as uPVC, aluminium and inappropriately designed or dimensioned timber windows and doors. Harm the setting of a conservation area. Constitute a visually obtrusive or dominant form. <p>Changes of use will be acceptable where, in compliance with the zoning objective, they make a positive contribution to the character, function and appearance of conservation areas and their settings. The council will consider the contribution of existing uses to the special interest of an area when assessing change of use applications and will promote compatible uses, which ensure future long-term viability.</p>	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CHC5: To protect protected structures and preserve the character and the setting of Architectural Conservation Areas. The City Council will resist the total or substantial loss of:</p> <ul style="list-style-type: none"> Protected structures in all but exceptional circumstances (and will require the strongest justification, including professional input with specialist knowledge so that all options receive serious consideration). Non-protected structures, which are considered to make a positive contribution to the character and appearance of an Architectural Conservation Area unless it can be demonstrated that the public benefits of the proposals outweigh the case for retention of the building. Demolition behind retained facades, may be considered on non-protected structures, depending on the significance of the structures; where it will secure the retention of facades which make a significant contribution to local townscape; where it will maintain the scale of original rooms behind principal facades and where the demolition is considered otherwise acceptable having regard to the above policy considerations. 	+/-	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CHC5: (Continued) Where an existing structure is considered to make a neutral or negative contribution to an Architectural Conservation Area, the City Council will encourage:</p> <ol style="list-style-type: none"> 1. Its demolition and replacement with a high quality building with enhanced environmental performance, or 2. Where appropriate, its improvement, recladding or refurbishment to improve both its appearance and environmental performance. <p>In all cases, demolition will only be permitted where:</p> <ol style="list-style-type: none"> 1. Any replacement building will be of exceptional design quality and deliver an enhancement to the area and improvement in environmental performance on-site, taking into account whole life cycle energy costs. 2. Firm and appropriately detailed proposals for the future re-development of the site have been approved and their implementation assured by planning condition or agreement. 	+/-	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CHC6: To ensure a sustainable future for historic and other buildings subject to heritage protection.</p> <p>The City Council will encourage and support works to upgrade the environmental performance of the existing building stock that incorporates good standards of design and appearance. Where these works involve historic buildings subject to protection (this includes buildings referenced on the Record of Protected Structures and non-protected structures in an Architectural Conservation Area), the works shall not adversely affect the special interest of the structure and thus a sensitive approach will be required, taking into account:</p> <ul style="list-style-type: none"> • The significance of the structure, and • The extent of intervention, including impact on historic fabric, traditional construction, visibility, siting and design. <p>The installation of renewable energy measures and equipment will be acceptable where sited and designed to minimise the visual impact and does not result in any significant loss of historic fabric or otherwise affect the significance of the structure.</p>	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>CHC7: To protect and manage trees in Architectural Conservation Areas.</p> <p>All trees which contribute to the character and appearance of the Conservation Area will be safeguarded, except where the City Council is satisfied that:</p> <ol style="list-style-type: none"> 1. The tree is a threat to public safety or prevents access to people with mobility problems. 2. The tree is not in keeping with the character of the Conservation Area or is part of a programme to rationalise the layout of tree planting in the area, or 3. In rare circumstance, where this is necessary to protect other specimens from disease. 	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
<p>CHC8: To facilitate off street parking for residential owners/occupiers where appropriate site conditions exist while protecting the special interest and character of protected structures and Conservation Areas.</p>	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
<p>CHC9: To protect and preserve National Monuments.</p> <ol style="list-style-type: none"> 1. To protect archaeological material in situ by ensuring that only minimal impact on archaeological layers is allowed, by way of the re-use of buildings, light buildings, foundation design or the omission of basements in the Zones of Archaeological Interest. 2. That where preservation in situ is not feasible, sites of archaeological interest shall be subject to 'preservation by record' according to best practice in advance of redevelopment. 3. That sites within Zones of Archaeological Interest will be subject to consultation with the City Archaeologist and archaeological assessment prior to a planning application being lodged. 	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHC9: (Continued)	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
4. That the National Monuments Service will be consulted in assessing proposals for development which relate to Monuments and Zones of Archaeological Interest.									
5. To preserve known burial grounds and disused historic graveyards, where appropriate, to ensure that human remain are re-interred, except where otherwise agreed with the National Museum of Ireland.									
5. That in evaluating proposals for development in the vicinity of the surviving sections of the city wall that due recognition be given to their national significance and their special character.									
6. To have regard to the Shipwreck inventory maintained by the DAHG. Proposed developments that may have potential to impact on riverine, inter-tidal and sub-tidal environments shall be subject to an underwater archaeological assessment in advance of works.									
1. To have regard to DAHG policy documents and guidelines relating to archaeology.									
CHC10: To continue to preserve and enhance the surviving sections of the city walls and city defences, a National Monument, according to the recommendations of the City Walls Conservation Plan 2015, with reference to the National Policy on Town Defences, adopted by the Department of the Environment in 2008.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC11: To preserve historic place and street names and ensure that new street names should reflect appropriate local historical or cultural associations.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHC12: To promote tourism in the medieval city and suburbs.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC13: To support and pursue a World Heritage nomination for the Historic City of Dublin, in partnership with the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs and other stakeholders.	+	0	0	0	0	0	+	+	No potential adverse impacts on EPO
CHC14: To promote the awareness of Dublin's industrial, military and maritime, canal side (including lock-keepers' dwellings) and rural (vernacular) heritage.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC15: To preserve, repair and retain in situ, historic elements of significance in the public realm, including: railings, milestones, city ward stones, street furniture, ironmongery, and any historic kerbing and setts identified in Appendices 7 and 8 of the Plan, and promote high standards for design, materials and workmanship in public realm improvements. Works involving such elements shall be carried out in accordance with the Department of Arts, Heritage, Regional, Rural and the Gaeltacht Advise Series volume: Paving, the Conservation of Historic Ground Surfaces.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC16: To undertake a feasibility study with a view to establishing a Museum of Dublin with a range of stakeholders, including: OPW, the National Cultural Institutions, Little Museum of Dublin, The Heritage Council and the City Council, in recognition of the wide range of cultural artefacts relating to the history and development of the city.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC17: To co-operate with and facilitate the State in its presentation of the National Monument at 14-17 Moore Street on a joint venture basis.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHC18: To support and promote a strategy for the protection and restoration of the industrial heritage of the city's waterways, such as the river Dodder, including retaining walls, weirs and millraces.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC19: To seek a use for Aldborough House on Portland Row in Dublin 1 that would facilitate its restoration.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC20: To support the retention and refurbishment of the cultural quarter associated with 1916 on Moore Street.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC21: Dublin City Council recognises the exceptional archaeological, architectural and historical significance of St Sepulchre's Plan complex (Kevin Street Garda Station) and will work with all stakeholders and interested parties to develop a Conservation Plan to safeguard the future of St Sepulchre's; identify appropriate future use(s) that reflects its historic and architectural importance and unlock the cultural tourism potential of the site in the context of the cathedral and the historic city.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC22: To seek the preparation of a detailed Masterplan for the Mountjoy Prison site prior to any proposed redevelopment that fully assesses the buildings/structures of special architectural/social/ historic interest.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC23: To lead and support the development of a shared vision for culture in the city in collaboration with cultural institutions and other cultural bodies in recognition of their key role in the cultural and economic success of the capital city.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC24: To ensure the continued development of Dublin as a culturally vibrant, creative and diverse city with a broad range of cultural activities provided throughout the city, underpinned by quality cultural infrastructure.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHC25: To support artists working in all art forms, and all forms of expression, permanent, temporary and time based by supporting the provision of quality workspaces to enable art production.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC26: To encourage and facilitate the temporary use of underused sites or buildings for artistic or cultural provision.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC27: To promote the vision of the Dublin UNESCO City of Literature, as a 'City of Words', where reading, writing and storytelling are daily experiences embedded in the cultural life of the city.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC28: That Dublin City Council is committed to ensuring that there is a supply of workspaces for artists in the city. It is the policy of Dublin City Council to work with all private, public and cultural stakeholders in co-operation to ensure that artistic work space is a key element in all multi-use developments in the city, in particular, ensuring there is provision for cultural and artistic space in developments.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC29: Dublin City Council will see insofar as possible to protect the cultural and artistic use of buildings in established cultural quarters.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC30: Dublin City Council will provide for the building and the development of live/work artist studio spaces and also build for artist workspaces/studios.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC31: All large scale, mixed use development (as defined by this Plan) or office or residential space will include cultural/artistic uses.	+	0	0	-	0	0	+	0	Potential impacts on noise
CHC32: Dublin City Council will encourage and facilitate the temporary use of underused sites or buildings for artistic or cultural provision.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHC33: To support the national cultural institutions and facilitate the provision of fit-for-purpose, sustainable cultural infrastructure such as museums, libraries, theatres, exhibition spaces, cinemas, and music venues in the city centre, suitable for all ages and accessible to all living, working or visiting the city and which reflect the role of Dublin as the capital city.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC34: To support and promote opportunities for everyone to participate in the city's cultural life by facilitate the provision of effectively-managed, self-sustaining cultural infrastructure suitable for all ages at the neighbourhood level, including regeneration areas, that is accessible to all in the locality and reflects the identity of Dublin's neighbourhoods.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC35: To highlight the profile of the Irish language in the urban environment and support the Irish reflected in local history/folklore/ place-names and are stated in Irish.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC36: To support the use of the Irish language on shopfronts, having regard to the principles set out in Dublin City Council's 'Shopfront Design Guidelines'	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC37: To protect and support Dublin city's existing cultural assets by facilitating the enhancement and/or growth of existing cultural spaces, including performance and entertainment spaces, while protecting the existing amenities of an area.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC38: To promote and facilitate the development, expansion and improvement of Dublin city's library network.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC39: To ensure that all Local Area Plans and other spatial plans incorporate relevant priorities and actions of Dublin City Council's Cultural Strategy 2009–2017.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHC40: To support existing, and encourage the growth of emerging, cultural clusters and hubs in the city, which bring together cultural activities with supporting uses such as restaurants, retail outlets etc. to create vibrant and innovative cultural experiences.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC41: To promote and support a vibrant night culture in the city centre that attracts a diverse range of cultural activity and is attractive for a wide range of age groups by encouraging a mix and balance of cultural activities and initiatives, including: performance and outdoor spaces for music and dance, initiatives such as Culture Night, etc., whilst also protecting existing amenities.	+	0	0	-	0	0	+	0	Potential impacts on noise
CHC42: To support the branding of the city region as an internationally competitive, cultural and creative city that attracts investment and talent based on Dublin's distinctive identity.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC43: To protect and improve the city's cultural tourism amenities and the natural and built environment that forms the basis of Dublin city's attractiveness for tourists, including niche tourism products.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC44: To promote awareness of our cultural heritage, promote safe and attractive streets and promote ease of legibility and connectivity between cultural spaces by encouraging and facilitating the provision of supporting cultural infrastructure in the public domain such as cultural signage, cultural information panels, a wayfinding system and a high quality, integrated network of attractive streets in the city centre.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 11 (Policies) Culture and Heritage	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
CHC45: To continue to animate the public domain by encouraging the provision of public art, temporary and permanent, across all art forms and artistic disciplines in the city centre and in neighbourhoods through such mechanisms as the Government-supported Percent for Art scheme and the development management process.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
CHC46: To encourage active uses of public spaces for the enjoyment of individuals, families and visitors to Dublin city and contribute to a sense of place by encouraging and facilitating the provision of fit-for purpose, multi-functional outdoor spaces for festivals, events, public art, markets, etc., in accessible, traditional and non-traditional locations.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO

Chapter 12 (Objectives) Sustainable Communities and Neighbourhoods	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SNO1: To engage with cultural, community and corporate stakeholders in an area, to develop inclusive strategies for community infrastructure provision.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SNO2: To liaise with the Department of Education and Skills (DES) on the educational needs of the city to ascertain the need for new or expanding educational facilities in the city to service the growing population.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SNO3: To actively assist and liaise with the DES in the provision of new schools where there is a demand for such, and to facilitate any potential expansion of existing schools throughout the city.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SNO4: To assist the DES with regard to the provision of a new school site at the Smurfit Complex on Botanic Road or at another appropriate location in the locality.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SNO5: To undertake a review of City Council community facilities in order to optimise, align and integrate services across neighbourhoods and communities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SNO6: To have regard in the preparation of local level plans to the Dublin Age Friendly City Strategy 2014–2019 and the Children Services Policy Statement.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 12 (Policies) Sustainable Communities and Neighbourhoods	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SN1: To promote good urban neighbourhoods throughout the city that are well designed, safe and suitable for a variety of age groups and tenures, which are robust, adaptable, well served by local facilities and public transport, and which contribute to the structure and identity of the city, consistent with standards set out in this Plan.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN2: To promote neighbourhood developments which build on local character as expressed in historic activities, buildings, materials, housing types or local landscape in order to harmonise with and further develop the unique character of these places.	+	0	0	0	0	0	+	0	No potential adverse impacts on EPO
SN3: To recognise the important role that community groups play in the city and to engage with consultative forums which are inclusive of all age groups.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN4: To have regard to the Department of Housing, Planning, Community and Local Government's Guidelines on Sustainable Residential Development in Urban Areas and its accompanying Urban Design Manual, 2010, the Guidelines on Local Area Plans and the related Manual, 2013 and the joint DTTS and DCLG's Design Manual for Urban Streets and Roads (DMURS), 2013 and the NTA's Permeability Best Practice Guide, 2015, in the making of sustainable neighbourhoods. www.environ.ie	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN5: To ensure that applications for significant large new developments (over 50 Units) are accompanied by a Social Audit and an Implementation and Phasing Programme in relation to community infrastructure, so that facilities identified as needed are provided in a timely and co-ordinated fashion.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 12 (Policies) Sustainable Communities and Neighbourhoods	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SN6: To optimise, align and integrate individual social audits/community infrastructure provision in developing and regenerating areas, the City Council will carry out and maintain a Community Audit for the Strategic Development and Regeneration Areas (SDRAs), where appropriate.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN7: To support and encourage the future growth of a wide range of public, social and community services essential to local community life, and to promote and seek to provide multi-use, fit-for-purpose community facilities which are suitable for all ages and all abilities, are operated according to an effective and efficient management strategy, and which are accessible in terms of physical design, location, cost of use, and opening hours.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN8: To continue to liaise and support with other statutory, voluntary and community groups in the provision of key services.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN9: To encourage Corporate Social Responsibility and Corporate Volunteer Programmes to ensure successful integration between the corporate sector and local communities sharing a community and neighbourhood facilities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN10: To facilitate the provision of new schools, school extensions and third-level institutions and to have regard to the provisions of the DoEHLG and DES (2008).	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN11: To seek to reserve lands for educational purposes in locations close to the areas of greatest residential expansion or greatest amount of unmet demand for school places and adjacent to community facilities so that the possibility of sharing facilities can be maximised in accordance with the Department of Education and Skills' Joint Code of Practice (2008).	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 12 (Policies) Sustainable Communities and Neighbourhoods	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SN12: To facilitate the provision of educational facilities in accordance with the requirements of the relevant education authorities and to encourage the shared use of school or college grounds and facilities with the local community, outside of core hours, anchoring such uses within the wider community.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN13: To facilitate multi-campus-style school arrangements, where appropriate, in close proximity to residential neighbourhoods and public transportation routes, and to promote an urban typology of school building design sustainable in a city context and which responds to the local character or streetscape and reflects the civic importance of a school to a local community.	+	0	0	0	0	+	0	0	N potential adverse impacts on EPO.
SN14: To facilitate the provision of continuing educational and lifelong learning facilities for all.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN15: To ensure the optimum use of community facilities and that high-quality facilities are accessible to all.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN16: To ensure that the provision of strategic new community infrastructure complements the range of existing neighbourhood facilities and, where appropriate, is located at the interface between communities to facilitate access across a number of neighbourhood areas and greater integration between communities and to support the provision of community facilities which act as point of integration between residents of new and established communities within neighbourhoods.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO

Chapter 12 (Policies) Sustainable Communities and Neighbourhoods	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SN17: To facilitate the provision in suitable locations of sustainable, fit-for-purpose childcare facilities in residential, employment, and educational settings, taking into account the existing provision of childcare facilities and emerging demographic trends in an area.	+	+	0	0	0	+	0	0	No potential adverse impacts on EPO
SN18: To encourage and facilitate the provision of a range of community facilities in the city that caters for all.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN19: To enhance and improve the provision of playgrounds, play spaces, playing pitches and recreational spaces in residential areas and in the city centre in accordance with the City Council's standards and guidelines.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN20: To promote the development of both indoor and outdoor facilities/spaces for young people, e.g., multi-use games areas (MUGAs), teenage shelters, skateboarding areas and skateboard parks, youth cafes, youth centres, and kids clubs.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN21: To facilitate the development or expansion of community-based healthcare facilities, respite homes and day care centres in residential areas.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN22: To facilitate the provision of hospital, local and other healthcare facilities in accordance with the requirements of the relevant healthcare authorities and to facilitate the consolidation or enhancement of these facilities within the city as an important resource for the city, region and State.	+	0	0	0	0	+	0	0	No potential adverse impacts on EPO
SN23: To provide accessible public toilets and showers if appropriate in locations close to the central business district and in city parks.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 12 (Policies) Sustainable Communities and Neighbourhoods	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
SN24: To support the implementation of the Dublin City Library Development Plan, including the development of the branch library service to serve local communities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN25: To actively support urban regeneration in areas across the city in order to enhance social cohesion and potential for positive change in areas of social exclusion.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN26: To recognise culture as an important mechanism in regeneration, with the potential to act as a catalyst for integration, community development, and civic engagement.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN27: To facilitate the balanced provision of social support services and avoid the proliferation of such facilities in any one part of the city.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN28: To support immigrant communities in relation to their social, cultural and community needs in an integrated manner through the implementation of Dublin City Council's Towards Integration: A City Framework.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN29: To promote built environments and outdoor shared spaces which are accessible to all. New developments must be in accordance with the principles of Universal Design, the City Development Plan's Access For All Standards, and the National Disability Authority's 'Building For Everyone'.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN30: To promote sustainable neighbourhoods which cater to the needs of persons in all stages of their lifecycle i.e. children, people of working age, elderly, people with disabilities.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO
SN31: To promote a built environment in the inner city, developing areas and strategic regeneration areas which supports the physical and emotional well-being of children.	+	0	0	0	0	0	0	0	No potential adverse impacts on EPO

Chapter 14 Land Use Zoning	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<p>This chapter sets out the general land use and zoning policies and objectives of the Plan. The zoning policies and objectives have been derived from the Core Strategy. The zoning chapter is based on following principles:</p> <ul style="list-style-type: none"> • The need to ensure that land use zoning spatially facilitates the aims of the core strategy and the desire to develop a compact, clean, green, connected city. • That land of different zonings is distributed throughout the city such that the anticipated development needs of the economy and society within the lifetime of the Plan (and for a reasonable period beyond) can be met. Zoned land must accommodate the expected growth in population and other growth needs of Dublin city within the lifetime of the Plan. There is circa 440 hectares of available zoned residential land that is capable of meeting a target of circa 29,500 units for the period 2016–2022 as per the core strategy. • That zoning should be designed to promote particular classes of land uses in appropriate locations, to reduce the possibility of conflicting land-uses, to protect resources (both natural and man-made) and to give residents, businesses and developers a degree of certainty. In some instances, zonings are used as a tool for shaping the city in a sustainable way and therefore may not solely reflect established land uses. 	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	<p>The Land Use Zoning Chapter promotes growth and zoned land must accommodate this growth. This has both positive and negative impacts. The potential significant adverse impacts if not mitigated are as follows :</p> <ul style="list-style-type: none"> a. Increased number of flood events due to increased development pressure b. Failure to tackle climate change and emissions from transport/climate change c. Short term impacts on air and noise during construction works d. Potential impacts on quality and status of water bodies e. Limitations on wastewater treatment facility and water supply, could lead to deterioration of water quality and species f. Increase in waste g. Effects on entries to Record of Protected Monuments and Protected Structures due to development pressures h. Impacts arising from visual impacts on landscape

Chapter 14 Land Use Zoning	PH1	BFF1	CF1	AQ1	W1	MA1	CH1	LS1	Comments
<ul style="list-style-type: none"> • That development should be encouraged in established centres, and the redevelopment of underutilised and brownfield land in these areas should be promoted with a view to consolidating and adding vitality to existing centres, and ensuring the efficient use of urban lands. • That intensification of sustainable development should be permitted adjacent and close to public transport nodes and corridors in order to maximise the use of public transport, to minimise trip generation and distribution and to promote sustainable development. • Dublin City Council recognises that a mix of uses is often more appropriate in urban areas than the more traditional single-use zoning, and that a mixed use or three-dimensional approach by way of horizontal and vertical differentiation in land uses results in urban areas of greater vitality. This approach is particularly appropriate in some central locations, in identified mix use zones, and in areas well served by public transport. • Consideration of the land-use strategies associated with adopted LAPs and SDZs and their implications for surrounding land uses. • Dublin City Council recognises that certain public bodies, and also educational and health institutions, provide important services for the city on their sites. The continued provision of these services is desirable for the economic, social and cultural health of the city, and it is the policy of Dublin City Council to co-operate with these bodies and institutions in relation to future planning and development 									

Glossary of Terms and Phrases

Alternatives: Options for accommodating the future development needs of an area within the constraints imposed by intrinsic environmental conditions.

Appropriate Assessment: An assessment of the likely significant effects of a plan or project on a European site in view of its conservation objectives. The European network comprises Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive and Ramsar sites designated under the Ramsar Convention (collectively referred to as European sites). The assessment is underpinned by the precautionary principle whereby a proposal cannot be granted permission if significant impacts are anticipated or cannot be ruled out. It entails the preparation of a Natura Impact Statement for projects, or a Natura Impact Report for plans/programmes under the Planning and Development (Amendment) Act 2010.

Baseline Environment: A description of the present state of the environment of the P/P area.

Biodiversity: Describes the variability among living organisms on the earth, including the variability within and between species and also within and between ecosystems.

Biodiversity Impact Assessment: Assessment of the potential implications of a plan, programme or project for biodiversity undertaken to ensure that it conserves biodiversity, results in sustainable use of biodiversity resources, and is legally compliant. For the purpose of this guidance, the term is interchangeably used with Ecological Impact Assessment.

Birds Directive: Council Directive of 2 April 1979 on the conservation of wild birds (79/409/EEC).

Brownfield Site: Land that is or was occupied by a permanent structure, which has become vacant, underused or derelict and has the potential for redevelopment.

Climate Change: Long-term variations in global temperature and weather patterns, which occur both naturally and as a result of human activity, primarily through greenhouse gas emissions.

Combined Heat and Power: is a system that involves the recovery of waste heat from power generation to form useful energy like useable steam. Combined heat and power is also the production of electricity and thermal energy in a single integrated structure.

Compact City: This term is used to explain a less wasteful pattern of development within the urban area. In spatial terms, all land areas would be used efficiently with effective integration of different uses, services and public transportation. The edges and boundaries of the urban area would be well defined. A city like Barcelona is a good case study.

Conservation Objectives: They refer to the maintenance at favourable status or restoration to such favourable status of the habitat and species for which a site has been designated as a European site.

Cumulative Effect: Incremental effects resulting from a combination of two or more individual effects (e.g., two or more individual plans or projects), or from an interaction between individual effects – which may lead to a synergistic effect (i.e., greater than the sum of individual effects), or any progressive effect likely to emerge over time.

Core Strategy: Means the strategy contained in a development plan in accordance with Section 5 of the Planning and Development Bill, 2009. The core strategy must show that development plan objectives are consistent with, as far as practicable with national and regional development objectives set out in the National Spatial Strategy and Regional Planning guidelines.

Designated Authority: An organisation that must be consulted in accordance with the SEA Regulations. For Ireland these are the Environmental Protection Agency (EPA) the Department of the Environment, Community and Local Government (DoECLG) and the Department of Agriculture, Food and the Marine (DoAFM).

District Heating: District heating (less commonly known as tele-heating) is a system for distributing heat generated in a centralised location for residential and commercial heating requirements such as space heating and water heating.

Easter River Basin District: incorporates all or part of 12 counties: Westmeath, Meath, Cavan, Kildare, Offaly, Fingal, South Dublin, Dún Laoghaire-Rathdown, Wicklow, a small portion of Wexford and Louth and Dublin city.

Environmental Protection Objectives: Measures used to show whether the objectives of a plan are beneficial to the environment, to compare the environmental effects or alternatives, or to suggest improvements, if complied with in full, the environmental objectives set should result in an environmentally neutral impact from implementation of the plan.

Environmental Report (ER): The part of the plan's documentation which contains the information required by Article 5 and Annex 1 of the SEA Directive.

Environmental Targets: A target usually underpins an objective often having a time deadline that should be met and should be accompanied by limits or thresholds.

European site: In the context of this guidance, and unless otherwise specified, the term 'European site' has the meaning assigned to it in the EC (Birds and Natural Habitats) Regulations 2011, which is also commonly known as a European site (see also Natura 2000 network below).

Evaluation of the Baseline: A description of the future state of the baseline in the absence of a plan or programme assuming business as usual or 'do nothing' scenarios, depending on which is more reasonable for the plan being proposed.

Flood Risk Assessment: A study to assess the risk of flooding under both the present and future circumstances, such as changes in climate, land use, development or flood risk management.

Flood Risk Management: combines the function of mitigating and monitoring flood risks and may include pre-flood, flood event or post flood activities.

Geographic Information Systems: Array of technological tools for the management, analysis and display of spatial data that can provide evidence-based information to support biodiversity impact assessment and natural resource management.

Green Corridor: Linear green connection along road and rail routes, rivers and canals, and, including cycling routes and rights of way. These interconnect larger open spaces, habitats and areas of natural landscape.

Green Infrastructure: This term is used in two ways. It can describe a network of connected, high quality, multifunctional open spaces, corridors, and the links in between that provide environmental services and multiple benefits for people and wildlife. It is also used to describe a broad range of design measures, techniques and materials that have a sustainable character and have a beneficial environmental impact such as solar panels, wind turbines, etc.

Green Roof: A roof with living vegetation growing in a substrate or growing medium, also referred to as eco-roofs, vegetated roofs, or living roofs.

Habitat: A place in which a particular plant of animal lives. Often used in the wider sense referring to major assemblages of plants and animals found together.

Habitats Directive: Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

In-combination effects: Incremental effects resulting from a combination of two or more plans and/or projects, an assessment requirement under the Habitats Directive. For the purpose of this guidance, and unless otherwise specified, the term 'in-combination effect' is used interchangeably with cumulative effect.

Indicators: This word is used either singularly or in conjunction with another term (e.g, Sustainable Indicators) and means a measurable and quantitative statistic which, when grouped over a time period, shows a trend.

Indirect Effect: Any aspect of a P/P that may have an impact (positive or negative) on the environment, both that is not a direct result of the proposed P/P.

Integrated Biodiversity Impact

Assessment: Practical and systematic framework for biodiversity impact assessment that integrates SEA requirements with AA for plans and programmes and EIA with AA for projects. The framework is envisaged to co-ordinate the collection of data, amalgamate assessment processes, promote best practice, optimise time and resources, reduce/avoid duplication of efforts by developers, assessors and the administration by improving communication channels and data sharing, enhance the congruence and efficiency of legal, administrative and operational processes, and achieve best results for the protection and conservation of biodiversity.

Interrelationships: Associations or linkages, related to environmental impact of the proposed P/P usually on environmental receptors.

Issues Paper: A Paper produced as part of the pre-draft consultation process, usually of land use plans, to facilitate consultation with stakeholders on key issues.

Key Environmental Issues: Those significant environmental issues, which are of particular relevance and significance within a P/P area and /or the zone of influence of that P/P. These issues should be identified during the SEA Scoping process.

Key Environmental Receptors: Aspects of the environment likely to be significantly impacted upon by the proposed P/P.

Kyoto Protocol: An international environmental treaty which legally binds countries that signed into the treaty to reduce their production of greenhouse gases by defined targets over a specified time period. The treaty was signed in 1997 in the city of Kyoto, Japan, and came into effect in 2005. Targets are set to achieve reductions in emissions by set percentages below 1990 levels.

Material Assets: Critical infrastructure essential for the functioning of society such as electricity generation and distribution, water supply, wastewater treatment and transportation, etc.

Metropolitan Area: This is a term used in Regional Planning guidelines and is a reference to the existing built up area of Dublin and its immediate environs (which includes parts of each of the four Dublin local authorities). It is a distinct urbanised area.

Mitigation Measures: The term is used to describe an action that helps to lessen the impacts of a process or development on the receiving environment. It is used most often in association with measures that would seek to reduce negative impacts of a process or development.

Modal shift: This is a term used to describe a situation where people change their travel behaviour (usually between home and work) from a particular type of transport (e.g., private car) to another more sustainable form of travel (e.g., public transport).

Monitoring Programme: A detailed description of the monitoring arrangements to be put in place to carry out the monitoring of the impact of the proposed P/P on the environment, including; frequency of monitoring, who has responsibility for monitoring, and responses if monitoring identifies significant negative impacts.

Natura 2000 Network: EU-wide network of nature conservation areas established under the 1992 Habitats Directive (and 1979 Birds Directive). The aim of the network is to assure the long-term survival of Europe's most valuable and threatened species and habitats. It includes SACs and SPAs.

Natura Impact Statement and Natura

Impact Report: The findings of the AA must be reported in a Natura Impact Statement for projects and a Natura Impact Report for land-use plans/programmes. They both represent a statement for the purposes of Article 6 of the Habitats Directive of the implications of a proposed plan objective, on its own or in combination with other plans and projects for one or more European sites, in view of the conservation objectives of the site. In the context of this guidance and in recognition of common usage, NIS is used to refer to both Natura Impact Statement and Natura Impact Report.

Non-technical Summary: A summary of the findings of the Environmental Report (ER) summarised under the headings listed in Annex 1 of the SEA Directive that can be readily understood by decision-makers and by the general public. It should accurately reflect the findings of the ER.

Reasonable Alternatives: Alternatives should be take into account the objectives and geographical scope of the P/P. There can be different ways of fulfilling the P/P objectives, or of dealing with environmental problems. The alternatives should be realistic, capable of implementation and should fall within the legal and geographical competence of the authority concerned.

River Basin Management Plan: As required by the EU Water Framework Directive (2000/60/EC), these plans will establish a strategic plan for the long-term management of the River Basin district.

SEA Directive: Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

Scoping: Process to determining what issues are to be addressed and setting out a methodology in which to address them in a constructed manner appropriate to the plan or programme. Scoping is carried out in consultation with the appropriate bodies.

Screening: The determination of whether implementation of a P/P would be likely to have significant environmental effects on the environment.

Secondary Effect: Effects that are not a direct result of the P/P, same as indirect effect.

Short-Term Effects: These are typical of those effects that, may occur during construction stage of a development, e.g., the increased traffic going to and from a site during construction, or, the noise associated with construction activities

Significant Effects: Effects on the environment, including: issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

Statutory Authority: The authority by which or on whose behalf the plan or programme is prepared.

Statutory Instrument: Any order, regulation, rule, scheme or bye-law made in exercise of a power conferred by statute.

Strategic Environment Assessment:

This is a statutory process of assessment to examine the likely significant environmental effects of a plan or programme, prior to their adoption. It identifies consequences of actions prior to implementation and requires appropriate mitigation measures to remove identified impacts as part of the plan or programme. The SEA process came into force in July 2001 from an EU Directive (EU Directive 2001/42/EC).

Sustainable Development: Sustainable development is a very important term in planning and development policies and is used to describe the character of development that minimises negative impacts on the environment and its natural resources. The definition of Sustainable Development comes from the Brundtland 9 Commission (1983) which states it as development 'that meets the needs of the present without compromising the ability of future generations to meet their own needs'. The Brundtland Commission was convened as a world commission on the environment amid growing concern for the deterioration of the natural environment, the depletion of natural resources and consequences for social and economic development.

Sustainable Urban Drainage Systems

(SUDS): A form of drainage that aims to control runoff as close to its source as possible using a sequence of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques.

Synergies: This term refers to strong connections between different locations, a complimentary character in terms of activities and types of uses and correspondingly strong interactions between the locations with frequent movement patterns between the locations.

Synergistic Effect: Effects that, when totalled, result in a greater or lesser effect than the sum of the individual effects.

Taking in Charge: This is a term to describe when a local authority takes over the running/ maintenance/ownership of lands that were developed privately but which have public access and a wider public benefit in their provision. The local authority thereafter looks after these areas for the public. Examples are residential estate roads and public parks.

Traffic/Transport Assessment: Also referred to as a Traffic Impact Assessment, this is a detailed assessment of the impacts of a proposed development on the transportation systems of the surrounding environment and is used to help inform decisions on design, access proposals, quantum of new car parking etc. It assesses the capacity of the existing street network to absorb additional quantities of trips and makes recommendations for traffic management, promotes integration with public transport, etc.

Transboundary: In impact assessment, it refers to any potential environmental effects that may occur across administrative boundaries, such as town lands, counties or national, and commonly refers to transboundary resources (e.g., protected areas or water bodies shared by two or more jurisdictions).

Urban Form: This term is a collective reference for the various separate important elements that create an urban area. These elements include at a broad level the relationship between streets, blocks, individual buildings, open space, etc. Understanding the urban form of a particular area can identify strengths and weaknesses of the existing area's character and can inform positive ideas for new proposals to respect or restore the urban form.

Urban Sprawl: A term used to describe unco-ordinated or haphazard expansion of urban type development into undeveloped and rural areas that adjoin the boundary of a town or city. Urban sprawl can erode the lines of division between urban locations and the countryside.

Water Framework Directive: A European Community Directive (2000/60/EC) designed to integrate the way we manage water bodies across Europe. It requires all inland and coastal waters to reach 'good status' or 'good ecological potential' in the case of heavily modified water bodies by 2015.

Zone of influence: A zone of influence of a proposal is the potential geographic area that could be affected by its implementation. Governmental guidance recommends consideration of an ex-situ 15 km buffer area for European sites around the proposal boundary for plans/programmes. Nevertheless, the zone of influence should be regarded as having flexible boundaries that may change during the assessment: more extensive areas may be considered where there are hydrological connections or smaller areas may suffice at project level.

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