SEA ENVIRONMENTAL REPORT

FOR THE

CORK CITY DEVELOPMENT PLAN 2022-2028

for: **Cork City Council**

City Hall

Anglesea Street

Cork

Comhairle Cathrach Chorcaí
Cork City Council

by: **CAAS Ltd.**

1st Floor

24-26 Ormond Quay Upper

Dublin 7

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List of Abbreviations

AA	Appropriate Assessment
ACA	Architectural Conservation Area
CAFE	Cleaner Air for Europe
CFRAM	Catchment Flood Risk Assessment and Management
CMATS	Cork Metropolitan Area Transport Strategy
CORINE	Co-ORdinated INformation on the Environment
CSO	Central Statistics Office
DAFM	Department of Agriculture, Food and Marine
DCCAE	Department of Communication, Climate Action and Environment
DCHG	Department of Culture, Heritage and the Gaeltacht
DECC	Department of Environment, Climate and Communications
DEHLG	Department of the Environment, Heritage and Local Government
DHLGH	Department of Housing, Local Government and Heritage
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EQS	Environmental Quality Standard
EU	European Union
FPO	Flora Protection Order
GSI	Geological Survey of Ireland
GCTPS	Cork City Transport and Planning Strategy
MASP	Metropolitan Area Strategic Plan
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NTA	National Transport Authority
OPW	Office of Public Works
pNHA	proposed Natural Heritage Area
PAS	Priority Action Substance
POPs	Persistent Organic Pollutants
RAL	Remedial Action List
RBD	River Basin District
RMP	Record of Monuments and Places
RPA	Register of Protected Areas
RSES	Regional Spatial and Economic Strategy
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SEO	Strategic Environmental Objective
SI No.	Statutory Instrument Number
SPA	Special Protection Area
THMs	Trihalomethanes
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHO	World Health Organisation
WFD	Water Framework Directive
WRZ	Water Resource Zone
WWTP	Wastewater Treatment Plant

Glossary

Appropriate Assessment

The obligation to undertake Appropriate Assessment (AA) derives from Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC. AA is a focused and detailed impact assessment of the implications of a strategic action (such as a plan or programme) or project, alone and in combination with other strategic actions and projects, on the integrity of a European Site in view of its conservation objectives.

Biodiversity and Flora and Fauna

Biodiversity is the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems' (United Nations Convention on Biological Diversity 1992).

Flora is all of the plants found in a given area.

Fauna is all of the animals found in a given area.

Environmental Problems

Annex I of Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27th June 2001, on the assessment of the effects of certain plans and programmes on the environment (the Strategic Environmental Assessment Directive) requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse.

Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the outset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

Environmental Vectors

Environmental vectors are environmental components, such as air, water or soil, through which contaminants or pollutants, which have the potential to cause harm, can be transported, coming into contact with human beings.

Mitigate

To make or become less severe or harsh.

Mitigation Measures

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing a human action, be it a plan, programme or project. Mitigation involves ameliorating significant negative effects. Where there are significant negative effects, consideration should be given in the first instance to preventing such effects or, where this is not possible, to lessening or offsetting those effects. Mitigation measures can be roughly divided into those that: avoid effects; reduce the magnitude or extent, probability and/or severity of effects; repair effects after they have occurred; and compensate for effects, balancing out negative impacts with other positive ones.

In the context of Article 6 of the Habitats Directive, mitigation measures are clearly distinguished from compensatory measures. Compensatory measures are intended to offset the negative effects of the plan or project so that the overall ecological coherence of the Natura 2000 Network is maintained.

Natural Heritage

The Heritage Act (1995) defines natural heritage as including flora, fauna, wildlife habitats, landscapes, seascapes, wrecks, geology, inland waterways, heritage gardens and parks.

Protected Structure

Protected Structure is the term used in the Planning and Development Act 2000 (as amended) and associated Regulations (as amended) to define a structure included by a planning authority in its Record of Protected Structures. Such a structure shall not be altered or demolished in whole or part without obtaining planning permission or confirmation from the planning authority that the part of the structure to be altered is not protected.

Recorded Monument

A monument included in the list and marked on the map which comprises the Record of Monuments and Places that is set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest which have so far been identified. Any works at or in relation to a recorded monument requires two months' notice to the Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media under Section 12 of the National Monuments (Amendment) Act, 1994.

Scoping

Scoping is the process of determining what issues are to be addressed, and setting out a methodology in which to address them in a structured manner appropriate to the plan or programme. Scoping is carried out in consultation with appropriate environmental authorities.

Strategic Environmental Assessment (SEA)

Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt it.

Strategic Environmental Objective (SEO)

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies which generally govern environmental protection objectives established at International, Community or Member State level and are used as standards against which the provisions of the Plan and the alternatives were evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

Section 1 SEA: Introduction and Benefits

1.1 Introduction

This is the Strategic Environmental Assessment (SEA) Environmental Report for the Cork City Development Plan 2022-2028. It has been undertaken by CAAS Ltd. on behalf of Cork City Council. The purpose of this report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan.

Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before such decisions are made. *Environmental Impact Assessment*, or EIA, is generally used for describing the process of environmental assessment for individual projects, while *Strategic Environmental Assessment* or SEA is the term which has been given to the environmental assessment of plans and programmes, which help determine the nature and location of individual projects taking place. SEA is a systematic process of predicting and evaluating the likely significant environmental effects of implementing a proposed plan or programme, in order to ensure that these effects are adequately addressed at the earliest appropriate stages of decision-making in tandem with economic, social and other considerations.

The SEA is being undertaken in order to comply with European SEA Directive[1], which introduced the requirement that SEA be carried out on plans and programmes that are prepared for a number of sectors, including land use planning.

1.2 Implications for the Planning Authority

SEA identifies the likely significant environmental effects of implementing the Plan. The findings of the SEA are expressed in this Environmental Report, an earlier version of which accompanied the Draft Plan on public display and has been updated following consultation, and identifies how environmental considerations were integrated into the Plan and how alternatives for the Plan were considered.

The planning authority has taken into account the findings of this report and other related SEA output during the Plan preparation process.

Following adoption of the Plan, an SEA Statement is prepared that summarises, inter alia, how environmental considerations have been integrated into the Plan.

1.3 Why SEA? The Benefits

SEA is the planning authority's and the public's guide to what are generally the best areas for development in the City.

SEA enables the planning authority to direct development towards robust, well-serviced and connected areas in the City – thereby facilitating the general avoidance of incompatible areas in the most sensitive, least well-serviced and least well-connected areas.

SEA provides greater certainty to the public and to developers. Plans are more likely to be adopted without delays or challenges and planning applications are more likely to be granted permission. Environmental mitigation is more likely to cost less.

An overlay of environmental sensitivities in Cork City are shown on Figure 1.1. Further detail on the weighting applied to different sensitivities is provided under Section 4.14.

Most of the City is of a low to moderate sensitivity due to the low level of environmental sensitivities occurring.

[1] Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27th June 2001, on the assessment of the effects of certain plans and programmes on the environment, transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), as 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 (SEA) Regulations 2004 (SI No. 436 of 2004), as amended by the Planning and Development (SEA) (Amendment) Regulations 2011 (SI No. 201 of 2011).

Higher levels of environmental sensitivities are found:

- In the City centre, as a result of cultural heritage sensitivities;
- Across much of the City Harbour and Estuary landscape character type, much of which is covered by a High Value Landscape designation;
- In areas of Extreme and High groundwater vulnerability, which occur across much of the Plan area; and
- Within and adjacent to the River Lee and its tributaries and Cork Harbour, on account of various water, ecological, flood risk and landslide risk (along the steeper valleys) sensitivities.

The Plan directs incompatible development away from the most sensitive areas in the City and focuses on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation.

Compact development can be accompanied by placemaking initiatives to enable the City, including its surrounding settlements, to become more desirable places to live – so that they maintain and improve services to existing and future communities.

Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

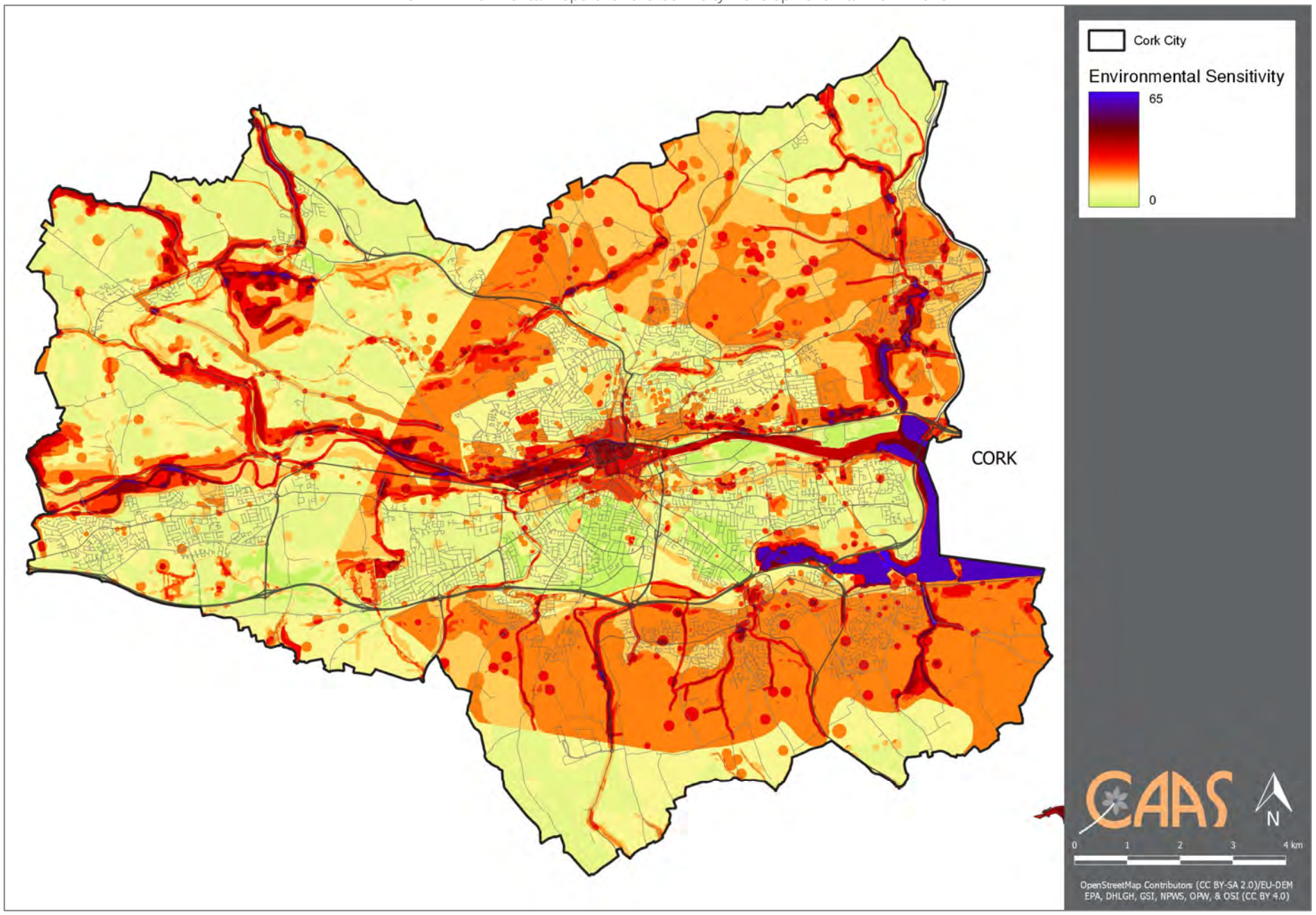

Figure 1.1 Overlay of Environmental Sensitivities in Cork City

Section 2 The Plan

2.1 Introduction

The Cork City Development Plan is a land use plan and overall strategy for the proper planning and sustainable development of the functional area of Cork City over the six-year period 2022-2028. The Plan sets out the Council's proposed policies and objectives for the development of the City over the Plan period.

2.2 Content of the Plan

The Plan comprises a series of separate, but closely linked and interrelated elements. The Plan comprises two volumes:

- Volume 1 – Written Statement
- Volume 2 – Mapped Objectives
- Volume 3 – Built Heritage Objectives

The structure of the Written Statement is as follows:

- Chapter 1 – Introduction
- Chapter 2 – Core Strategy
- Chapter 3 – Delivering Homes and Communities
- Chapter 4 – Transport and Mobility
- Chapter 5 – Climate and Environment
- Chapter 6 – Green and Blue Infrastructure, Open Space and Biodiversity
- Chapter 7 – Economy and Employment
- Chapter 8 – Heritage, Arts and Culture
- Chapter 9 – Environmental Infrastructure and Management
- Chapter 10 – Key Growth Areas and Neighbourhood Development Sites
- Chapter 11 – Placemaking and Managing Development
- Chapter 12 – Land Use Zonings
- Chapter 13 – Implementation
- Appendix 1 – Compliance with Ministerial Guidelines
- Appendix 2 – Strategic Environmental Assessment
- Appendix 3 – Appropriate Assessment
- Appendix 4 – Strategic Flood Risk Assessment

2.3 Strategic Vision and Key Strategic Principles

The Strategic Vision for Cork City included in the Plan is for Cork City to take its place as a world class city, driving local and regional growth, embracing diversity and inclusiveness and growing as a resilient, healthy, age-friendly and sustainable compact city with placemaking, communities and quality of life at its heart.

This Strategic Vision is based on the following Key Strategic Principles:

- Compact growth: Integrate land-use and transport planning to achieve a compact city with 50% of all new homes delivered within the existing built-up footprint of the City on regenerated brownfield, infill and greenfield sites identified in the Core Strategy, and to achieve higher population densities aligned with strategic infrastructure delivery.
- A city of neighbourhoods and communities: Develop a sustainable, liveable city of neighbourhoods and communities based on the 15-minute city concept, ensuring that placemaking is at the heart of all development.
- Sustainable and active travel: To implement the Cork Metropolitan Area Transport Study (CMATS) and develop a transformed sustainable transport system with a significant shift toward walking, cycling and public transport and to enshrine this principle in all developments across the City.
- Enhanced built and natural heritage: Protect, enhance, support and develop our built and natural heritage, our open spaces and parks, and our green and blue infrastructure, and expand our built heritage with new buildings, townscapes and public spaces achieved through the highest standards of architecture and urban design.
- A strong and diverse economy: Support Cork City's role as the economic driver for the region and the creation of a strong, resilient, diverse and innovative economy.
- A resilient City: Contribute to a framework for the transition to a low-carbon and climate-resilient City, resilient to extreme weather events, pandemics, economic cycles and other potential shocks.
- A healthy, inclusive and diverse city: Build on Cork City's status as a World Health Organisation designated Healthy City, offering an inclusive and vibrant environment for all whilst promoting healthy living and wellbeing.
- A connected city: Cork City will continue to be a highly connected city providing local, regional, national and international connectivity.
- A city of learning and culture: To build on Cork's designation as a UNESCO Learning City and the city's rich cultural heritage and to foster learning, culture, heritage and the arts throughout the City.

2.4 Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development

Far in advance of both the submission of the Chief Executive's Draft Plan to the Elected Members for approval, the placing of the Draft Plan on public display and the adoption of the Plan, Cork City Council undertook various works in order to inform the preparation of the Plan.

The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development within the City.

Strategic work undertaken by the Council includes background work in relation to Plan Strategies and other provisions for a variety of sectors.

The undertaking of this SEA process and the associated AA and SFRA processes contributed towards the integration of environmental considerations into individual Plan provisions as detailed in Section 9 of this report.

2.5 Relationship with other relevant Plans and Programmes

It is acknowledged that many of the major issues affecting the City's development are contingent on national policy and government funding.

The Plan sits within a hierarchy of statutory documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management. The Plan must comply with relevant higher-level strategic actions and will, in turn, guide lower-level strategic actions. These documents include plans and programmes such as those detailed in Appendix I[2] (see also, Section 4 "Environmental Baseline", Section 5 "Strategic Environmental Objectives", Section 6 "Description of Alternatives" and Section 9 "Mitigation Measures"). These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework (NPF) sets out Ireland's planning policy direction up to 2040. The NPF is to be implemented through Regional Spatial and Economic Strategies (RSESs) and lower tier Development Plans and Local Area Plans. The RSES for the Southern Region sets out objectives for land use planning, tourism, infrastructure, sustainable development, environmental protection and environmental management that have been subject to environmental assessment and must be implemented through the City Development Plan.

As required by the Planning and Development Act 2000, as amended, the City Development Plan is consistent with and conforms with national and regional policies, plans and programmes, including the NPF and the RSES for the Southern Region. The City Development Plan will, in turn, guide lower-level strategic actions, such as Local Area Plans that will be subject to their own lower-tier environmental assessments.

In order to be realised, projects included in the Plan (in a similar way to other projects from any other sector) will have to comply, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier AA, EIA and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework.

[2] Appendix I is not intended to be a full and comprehensive review of EU Directives, the transposing regulations or the regulatory framework for environmental protection and management. The information is not exhaustive and it is recommended to consult the Directive, Regulation, Plan or Programme to become familiar with the full details of each.

Section 3 SEA Methodology

3.1 Introduction to the Iterative Approach

Figure 3.1 provides an overview of the integrated Plan preparation, SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes.

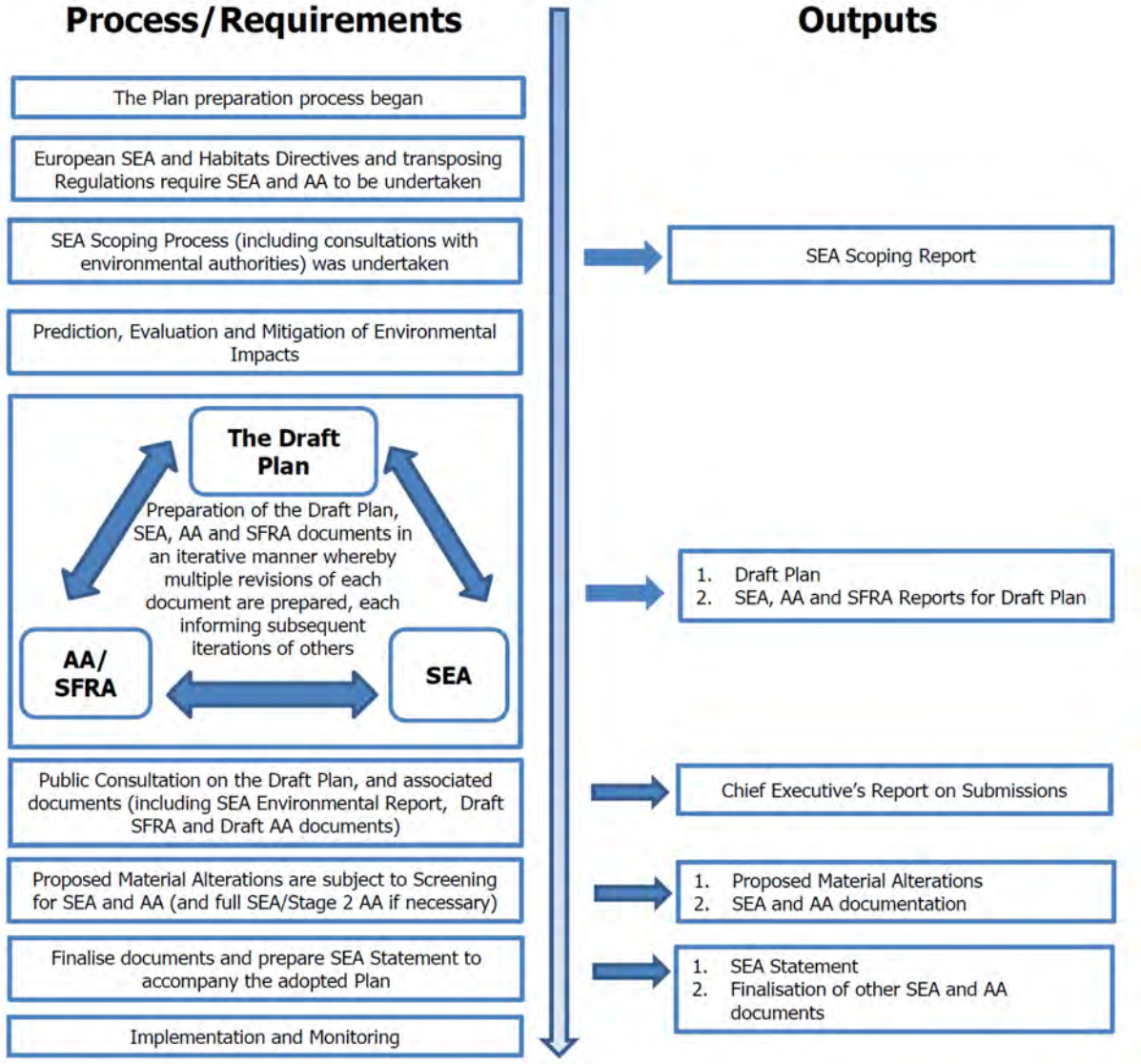

Figure 3.1 Overview of the SEA/AA/SFRA Plan-preparation Processes

3.2 Appropriate Assessment and Integrated Biodiversity Impact Assessment

3.2.1 Appropriate Assessment

Appropriate Assessment (AA) Screening and Stage 2 AA were undertaken alongside the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The conclusion of the AA is that the Plan will not affect the integrity of the European Sites, alone or in combination with other plans or projects.[3]

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed the SEA.

3.2.2 Integrated Biodiversity Impact Assessment

Many elements of Integrated Biodiversity Impact Assessment as detailed in the EPA's (2013) Practitioner's Manual have been aligned with in the undertaking of the SEA for the Plan. These include:

Scoping

- Biodiversity-relevant issues were identified for consideration at scoping stage and these are now detailed in Section 4.
- Reference to a zone of influence is provided at Section 4.

Baseline

- Biodiversity data sources relevant for this local level assessment have been identified and datasets collated/gathered.
- The biodiversity baseline addresses designated sites and other habitats and species of ecological value.
- AA information has been incorporated into the SEA baseline.

Alternatives

- Impacts upon biodiversity are considered under each of the alternatives and potential conflicts can be mitigated.

Impact assessment

- Effects on biodiversity are identified and assessed and the AA considers the interrelationship between biodiversity and potential effects on European Sites.

Mitigation and monitoring

- Taking into account all measures contained within the Plan, all the proposed mitigation measures deriving from the various processes were generally consistent and compatible.
- Indicators and associated targets have been included in SEA for monitoring European Sites.

Reporting

- This SEA ER addresses all biodiversity-related considerations relevant for this level of assessment.
- This SEA ER contains all biodiversity-relevant information, data, figures and maps relevant for this level of assessment.
- This SEA ER has been informed by the AA findings.

Communication and consultation

- Submissions received have been taken on board.
- The preparation of the Plan, SEA and AA have taken place concurrently and the findings of the AA have informed the SEA.

3.3 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. Recommendations from the SFRA have been integrated into the Plan.

3.4 Scoping

The scope of environmental issues to be dealt with by the SEA of the Plan together with the level of detail to which they are addressed was broadly decided upon taking into account the collection of environmental baseline data and input from environmental authorities. Scoping allowed the SEA to become focused upon key issues relevant to the environmental

[3] Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be: (a) no alternative solution available, (b) imperative reasons of overriding public interest for the plan to proceed; and (c) adequate compensatory measures in place.

components that are specified under the SEA Directive[4].

All relevant environmental authorities identified under the SEA Regulations as amended, were sent SEA scoping notices by the Council indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council[5].

Submissions made by the Department of Agriculture, Food and the Marine, Department of Environment, Climate and Communications (one from the Geological Survey Ireland and one from the Inland Fisheries Ireland), Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media and the Environmental Protection Agency influenced the scope of the assessment undertaken, the findings of which are included in this report.

3.5 Alternatives

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. In accordance with this requirement, alternatives for the Plan are identified and assessed in Sections 6 and 7.

3.6 Instances whereby Environmental Considerations were not integrated into the Plan

The Plan, considered as a whole, contributes towards environmental protection and management and sustainable development and complies with various legislative requirements. This is identified throughout the SEA documentation.

Various Plan provisions that would contribute towards the sustainable development of the City would, at the same time, have the potential to conflict with the environment, were mitigation measures not taken into account. This is normal and mitigation measures have been integrated into the Plan to deal with these potential effects.

However, a number of alterations were adopted by the Elected Members as part of the Plan that are internally inconsistent with the overall approach provided for by the Plan, including those which are identified on Table 3.1 and were advised against by the Plan-preparation/SEA process. Also included on Table 3.1 is advice that was provided by the SEA for consideration in advance of adoption of the Plan.

It is noted that a number of alterations that were recommended against in advance of public display were subsequently subject to minor modification mitigating environmental concerns (Amendments No. 275, 277 and 2.64).

[4] These components comprise biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

[5] The following authorities were notified: Environmental Protection Agency; Department of Environment, Climate and Communications; Department of Agriculture, Food and the Marine; Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media; Department of Housing, Local Government and Heritage; and Cork County Council.

Table 3.1 Alterations Advised Against but Adopted (including:)

Material Alterations No's.	Commentary provided in advance of Plan Adoption	Mitigation Identified	Recommendation provided in advance of Plan Adoption
Amendment 2.27 (subject to modification), Amendment 2.29, Amendment 2.60, Amendment 2.61, Amendment 2.62, Amendment 2.63, Amendment 2.68, Amendment 2.69, Amendment 2.70, Amendment 2.72, Amendment 2.76, Amendment 2.78, Amendment 2.95, Amendment 2.96, Amendment 2.99 (subject to modification), Amendment 1.127, Amendment 1.307 (subject to modification), Amendment 2.3, Amendment 2.4, Amendment 2.24, Amendment 2.25 and Amendment 2.26	These alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning. As a result they would present additional, unnecessary and potentially significant adverse effects on various environmental components, including soil, water, biodiversity, the landscape, air and climatic factors and material assets. Land use zoning proposed is considered to be premature under various alterations in the context of current population targets. Potentially significant adverse unnecessary effects, would be likely to include: • Effects on ecology, ecological connectivity and non-designated habitats and species • Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces • Conflict with efforts to maximise sustainable compact growth and sustainable mobility • Occurrence of adverse visual impacts (including erosion of designated Landscape Preservation Zones) • Increased loadings on water bodies • Effects on an aquifers of elevated and high vulnerability Where such alterations are further from the centre of urban/suburban areas and are greenfield sites, potentially significant unnecessary adverse effects would be likely to include: • Difficulty in providing adequate and appropriate waste water treatment as a result of zoning outside of established built development envelopes of established built development envelopes • Adverse impacts upon the economic viability of providing for public assets and infrastructure • Adverse impacts upon carbon emission reduction targets in line with local, national and European environmental objectives • Conflicts between transport emissions, including those from cars, and air quality • Conflicts between increased frequency of noise emissions and protection of sensitive receptors • Potential effects on human health as a result of potential interactions with environmental vectors Taking into account the above, there is a need to reject these amendments in their current state in order to ensure proper planning and sustainable development. Furthermore, Amendment 2.99 was found to potentially conflict with proper flood risk management and not comply with the Flood Risk Management Guidelines; there would be potential risk to environmental components including human health and material assets. As a result, there is a need to reject this amendment in its current state in order to comply with the Flood Risk Management Guidelines.	These alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning. As a result, there is a need to reject these amendments in their current state in order to provide the most evidence-based framework for development and ensure sustainable development and proper planning.	Do not adopt as part of Plan

3.7 Environmental Report

This SEA Environmental Report predicts and evaluates the likely significant effects of the Plan and the alternatives.

The Environmental Report provides Cork City Council, stakeholders and the public with a clear understanding of the likely environmental consequences of implementing the Plan.

Mitigation measures to prevent or reduce significant adverse effects posed by the Plan are identified in Section 9 – these have been integrated into the Plan.

An earlier version of this report was report was updated in order to take account of relevant recommendations contained in submissions and in order to take account of changes that were made to the original, Draft Plan that was placed on public display.

The Environmental Report is required to contain the information specified in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004), as amended (see Table 3.1).

No significant difficulties have been encountered during the undertaking of the assessment.

There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the Plan area with overall status currently not assigned to them and the term “unassigned status” applies in respect of these waterbodies. The SEA ensured that the Plan contains measures that will contribute towards the maintenance and improvement of status of all water bodies within the zone of influence.

3.8 SEA Statement

On finalisation of the Plan, an SEA Statement is prepared that includes information on:

- How environmental considerations have been integrated into the Plan, highlighting the main changes to the Plan that 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.

Table 3.2 Checklist of Information included in this Environmental Report

Information Required to be included in the Environmental Report	Corresponding Section of this Report
(A) Outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes	Sections 2, 5 and 8
(B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the plan or programme	Section 4
(C) Description of the environmental characteristics of areas likely to be significantly affected	Sections 4, 7 and 8
(D) Identification of any existing environmental problems which are relevant to the plan or programme, particularly those relating to European protected sites	Section 4
(E) List of environmental protection objectives, established at international, EU or National level, which are relevant to the plan or programme and describe how those objectives and any environmental considerations have been taken into account when preparing the Plan	Sections 5, 7, 8, 9 and Appendix I
(F) Describe the likely significant effects on the environment	Sections 7 and 8
(G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the plan or programme	Section 9
(H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties)	Sections 3, 6, 7 and 8
(I) A description of proposed monitoring measures	Section 10
(J) A non-technical summary of the above information	Appendix II Non-Technical Summary
(K) Interrelationships between each environmental topic	Addressed as it arises within each Section

Section 4 Environmental Baseline

4.1 Introduction

Reflecting the specifications in the SEA Directive, the relevant aspects of the current state of the environment for the following environmental components are described in this section: biodiversity and flora and fauna, population and human health, soil, water, air and climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

This description includes information that is relevant to lower tier planning, environmental assessments and decision-making[6].

Given the potential for impacts beyond the City boundary, the spatial scope of the SEA takes into account the zone of influence (15km or greater where relevant) of the Plan.

4.2 National Reporting on the Environment

The EPA's *"Ireland's Environment – An Assessment 2020"* report provides an integrated assessment of the overall quality of Ireland's environment, the pressures being placed on it and the societal responses to current and emerging environmental issues. This report has informed various parts of the environmental baseline provided below. The key environmental challenges or messages identified by the report are:

Environmental Policy Position
A national policy position for Ireland's Environment.

Full implementation
Full implementation of existing environmental legislation and a review of the governance around the coordination on environmental protection across public bodies.

Health and Wellbeing
Protecting the Environment is an Investment in Our Health and Wellbeing.

Climate
Systemic change is required for Ireland to become the climate-neutral and climate resilient society and economy that it aspires to be.

Air Quality
Adoption of measures to meet the World Health Organization air quality guideline values should be the target to aim for in the Clean Air Strategy.

Nature
Safeguard nature and wild places as a national priority and to leave a legacy for future generations.

Water Quality
Improve the water environment and tackle water pollution locally at a water catchment level.

Marine
Reduce the human-induced pressures on the marine environment.

Clean Energy
Ireland needs to move rapidly away from the extensive use of fossil fuels to the use of clean energy systems.

Environmentally Sustainable Agriculture
An agriculture and food sector that demonstrates validated performance around producing food with a low environmental footprint.

Water Services
Drinking water and wastewater infrastructure must meet the needs of our society.

Circular Economy
Move to a less wasteful and circular economy where the priority is waste prevention, reuse, repair and recycling.

Land Use
Promote integrated land-mapping approaches to support decision-making on sustainable land use.

The report highlights that high-quality green and blue spaces are not just for nature but are for peoples' health and wellbeing, particularly in the context of an increasingly urban society and increasing settlement densities.

[6] Article 5 of the SEA Directive, in accordance with the established European principle of subsidiarity, requires that the Environmental Report includes the information that may reasonably be required taking into account, inter alia, the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.

4.3 Sustainable Development Goals

Implementation of the Plan will contribute towards efforts to achieve a number of the 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development, which were adopted by world leaders in 2015 at a United Nations Summit and came into force in 2016. These Goals include:

- Goal 3. Ensure healthy lives and promote well-being for all at all ages.
- Goal 6. Ensure availability and sustainable management of water and sanitation for all.
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all.
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.
- Goal 12. Ensure sustainable consumption and production patterns.
- Goal 13. Take urgent action to combat climate change and its impacts.
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

4.4 Likely Evolution of the Environment in the Absence of a new Plan

In the absence of a new Plan it is uncertain how permission for new development would be applied for and considered.

The 2015-2021 Plan has contributed towards environmental protection within Cork City. If the 2015-2021 Plan was to expire and not be replaced by a new Plan, this would result in a deterioration of the City's planning and environmental protection framework. Although higher level environmental protection objectives – such as those of various EU Directives and transposing Irish Regulations – would still apply, the deterioration of this framework would mean that new development would be less coordinated and controlled.

As a result, there would be a decreased likelihood in the extent, magnitude and frequency of positive effects occurring, including:

- Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond.
- Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats.
- Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna.
- Sustains existing sustainable rural management practices – and the communities who support them – to ensure the continuation of long-established managed landscapes and the flora and fauna that they contain.
- Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management.
- Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond.
- Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond.
- Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.
- Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to

develop more sensitive, less well-serviced lands elsewhere in the City and beyond.
- Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.
- Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond.
- Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations.
- Contribution towards flood risk management and appropriate drainage.
- Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond.
- Contribution towards compliance with national and regional water services and waste management policies.
- Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments.
- Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth.
- Contribution towards reductions in average energy consumption per capita including promoting sustainable compact growth, sustainable mobility, sustainable design and energy efficiency.
- Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond.
- In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to:
    - Sustainable compact growth;
    - Sustainable mobility, including walking, cycling and public transport;
    - Drainage, flood risk management and resilience;
    - Sectors including energy and buildings; and
    - Sustainable design, energy efficiency and green infrastructure.
- Contributes towards protection of cultural heritage elsewhere by facilitating development within an existing built footprint.
- Contributes towards protection of cultural heritage within an existing built footprint by facilitating brownfield development and regeneration.
- Contributes towards protection of wider landscape and landscape designations by facilitating development within an existing built footprint.

As a result, there would be an increased likelihood in the extent, magnitude and frequency of adverse effects on all environmental components occurring, including:

- Arising from both construction and operation of development and associated infrastructure:
    - Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna;
    - Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
    - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
- Potential interactions if effects arising from environmental vectors.
- Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands.
- Potential for riverbank and coastal erosion.
- Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology.
- Increase in flood risk and associated effects associated with flood events.
- Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts).
- Increases in waste levels.
- Potential impacts upon public assets and infrastructure.
- Interactions between agriculture and soil, water, biodiversity and human health – including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.
- Potential conflict between development under the Plan and aiming to reduce carbon emissions

in line with local, national and European environmental objectives.
- Potential conflicts between transport emissions, including those from cars, and air quality.
- Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors.
- Potential conflicts with climate adaptation measures including those relating to flood risk management.
- Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
- Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

4.5 Natural Capital and Ecosystem Services

Cork City's natural capital comprises its renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of ecosystem services that provide benefits to people. These benefits can include clean air and water, a stable climate, protection from floods, food, resources for fuel, building materials, clothes and medicines, recreation. Managing natural capital so that it can continue to deliver the ecosystem services that give us these benefits is important in order to ensure sustainable development. Unmanaged natural capital risks the continued degradation and depletion of these assets, and in turn, of their capacity to provide the economy and society with the ecosystem benefits that they depend on. These services also regulate climate, regulate water flows (e.g. through wetlands and forests), sequester and store carbon in peatlands and improve soil quality for crops.

Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing. There are four main types; provisioning, regulating, supporting and cultural services. Provisioning services are the products obtained from ecosystems such as food, fresh water, wood, fibre, genetic resources and medicines. Regulating services are defined as the benefits obtained from the regulation of ecosystem processes such as climate regulation, natural hazard regulation, water purification and waste management, pollination or pest control. Support services highlight the importance of ecosystems to provide habitat for migratory species and to maintain the viability of gene-pools. Cultural services include non-material benefits that people obtain from ecosystems such as spiritual enrichment, intellectual development, recreation and aesthetic values[7].

In preparing the Plan and developing policy objectives, the Council have followed these ecosystem services approach principles:

a) Consideration of natural systems - by using knowledge of interactions in nature and how ecosystems function (including at Plan Chapter 6 "Green and Blue Infrastructure Open Space and Biodiversity");
b) Taking into account of the services that ecosystems provide - including those that underpin social and economic well-being, such as flood and climate regulation (including at Plan Chapter 5 "Climate Change and the Environment"), resources for food, fibre or fuel (including at Plan Chapter 6 "Green and Blue Infrastructure Open Space and Biodiversity"), or for recreation, culture and quality of life (including at Plan Chapters 3 "Delivering Homes and Successful Neighbourhoods" and 7 "Economy and Employment");
c) Involving people - those who benefit from the ecosystem services and those managing them need to be involved in decisions that affect them. Public consultation has informed the preparation of the Plan which was further refined before adoption, taking into account submissions/observations made on the Draft Plan during public display.

The following natural capital and ecosystem services issues are relevant to this SEA and have been taken into account in the provisions of the Plan:

- Air quality;
- Noise pollution;
- Light pollution;
- Water quality and river basin management including interactions with soil;
- Soil/geological storage of water, contributing towards flood control;
- Land supporting food production; and
- Natural resources supporting energy production and recreation.

4.6 Biodiversity and Flora and Fauna

4.6.1 Introduction

Information on biodiversity and flora and fauna that is relevant to project planning and development and associated environmental

[7] https://biodiversity.europa.eu/topics/ecosystem-services

assessment and administrative consent of projects includes that on designated ecological sites and protected species, ecological connectivity (including stepping stones and corridors) and non-designated habitats.

4.6.2 Overview of High Value Biodiversity and Designations

Cork City supports a variety of natural and semi-natural habitats and a wide range of plant and animal species, which have come under threat due to development pressures and increased demand for new development land.

Cork Harbour, the River Lee and associated water courses, estuaries, salt marshes, reedbeds and intertidal mudflats are of ecological importance, providing a habitat for a variety of plant and animal species including mosses, lichens and bats and act as a corridor for the movement of species between the surrounding countryside and urban areas. These areas contain many rare and threatened habitats and species of national and international importance, including those protected under the national and European legislation.

A network of urban green spaces, including gardens, parks, graveyards, amenity walks, hedgerows, railway lines and patches of woodland and scrub, provide habitats and ecological connectivity within the City and beyond.

Ecological designations in Cork City include:

- Special Protection Areas[8];
- Special Areas of Conservation[9];
- Proposed Natural Heritage Areas[10];
- Ramsar sites[11]
- Certain entries to the Water Framework Directive Register of Protected Areas[12];
- Salmonid Rivers identified by Regulations (S.I. 293 only)[13];
- Wildfowl Sanctuaries[14];
- Flora Protection Order sites[15]; and
- Tree Preservation Orders[16] (TPOs) .

The zone of influence of the Plan beyond the City area with respect to impacts upon ecology via surface waters – including designated ecology – can be estimated to be areas within 15 km of the City boundary and all downstream areas of catchments which drain the City.

4.6.3 European Sites

European sites in the City occur along the main waterways and areas adjacent to the coastline. European sites comprise:

- Special Areas of Conservation[17] (SACs); and
- Special Protection Areas[18] (SPAs).

The SEA uses the same general zone of influence cited in the AA, a 15 km buffer around the City. There are three European sites (two SACs and one SPA) designated within this zone (mapped on Figure 4.1). These comprise:

[8] For more detail refer to Section 4.6.3.
[9] For more detail refer to Section 4.6.3.
[10] For more detail refer to Section 4.6.4.
[11] For more details refer to Section 4.6.8.
[12] For more detail refer to Sections 4.6.6 and 4.9.7.
[13] For more detail refer to Section 0.
[14] Areas that have been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed. **There is one Wildfowl Sanctuary within Cork City: The Lough, Cork (WFS-12).**
[15] The Flora (Protection) Order, 2015 (S.I. No. 356 of 2015) gives legal protection to 65 species of bryophytes in the Republic of Ireland (25 liverworts and 40 mosses). **There are four locations within the City with a number of species protected by the Order, including: Blarney (*Entosthodon muhlenbergii*); north of Cork City (*Bryum intermedium*); Cork City (*Scleropodium touretii*); and Passage (*Scleropodium touretii*).** For more details refer to: https://dahg.maps.arcgis.com/.
[16] TPOs are a planning mechanism whereby individual trees or groups of trees can be identified as important and protected by a TPO. **There are 12 TPOs identified within the City. During the lifetime of the Development Plan, Cork City Council will continue to evaluate trees in the City and, where appropriate, make new Tree Protection Orders.**
[17] SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000. The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010. The Regulations have been prepared to address several judgments of the Court of Justice of the European Union against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.
[18] SPAs have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - referred to as the Birds Directive - due to their conservation value for birds of importance in the EU.

- Great Island Channel SAC[19] (001058) – c.1.40 km to the east of the City;
- Blackwater River (Cork/Waterford) SAC[20] (002170) – c.7 km to the north of the City; and
- Cork Harbour SPA[21] (004030) – partially within the eastern parts of the City.

For more detail on European sites please refer to the AA Natura Impact Report that accompanies the Plan and this SEA Environmental Report.

4.6.4 Proposed Natural Heritage Areas

Proposed NHAs (pNHAs) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000.

There are no NHAs designated within the City but there are 11 pNHAs designated within, partially within or adjacent to the City. These sites are mapped[22] on Figure 4.2 and comprise:

- Lee Valley pNHA (000094);
- Shournagh Valley pNHA (001039);
- Blarney Castle Woods pNHA (001039);
- Douglas River Estuary pNHA (001046);
- Glanmire Wood pNHA (001054);
- Cork Lough pNHA (001081);
- Dunkettle Shore pNHA (001082);
- Ballincollig Cave pNHA (001249);
- Blarney Lake pNHA (001798);
- Ardamadane Wood pNHA (001799); and
- Blarney Bog pNHA (001857).

4.6.5 Land Cover Mapping

CORINE[23] land cover mapping for the City is shown on Figure 4.3. The most dominant land cover types are urban fabric (concentrated within the City's centre) and pastures and agricultural lands (in the areas surrounding the City's centre).

Categories from CORINE mapping that may indicate areas with the potential for Annex I habitats (see Figure 4.5) include:

- Non-irrigated arable land;
- Pastures;
- Complex cultivated patterns;
- Land principally occupied by agriculture with significant areas of natural vegetation;
- Broad-leaved forest;
- Coniferous forest;
- Mixed forests;
- Transitional woodland-shrub;
- Salt marshes;
- Intertidal flats;
- Estuaries; and
- Green urban areas.

4.6.6 Register of Protected Areas

In response to the requirements of the Water Framework Directive a number of 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 by wildlife have been listed on Registers of Protected Areas (RPAs). Entries to the RPAs within and adjacent to the City designated by virtue of their value to biodiversity are addressed in this section while RPAs designated by virtue of their value to humans are addressed under Section 4.9.7.

[19] Sensitive features include: tidal mudflats and sandflats; and Atlantic salt meadows.
[20] Sensitive features include: estuaries; tidal mudflats and sandflats; perennial vegetation of stony banks; salicornia mud; Atlantic salt meadows; Mediterranean salt meadows; floating river vegetation; old oak woodlands; alluvial forests; freshwater pearl mussel; white-clawed crayfish; sea lamprey; brook lamprey; river lamprey; twaite shad; Atlantic salmon; otter; and Killarney fern.
[21] Sensitive features include: little grebe; great crested grebe; cormorant; grey heron; shelduck; wigeon; teal; pintail; shoveler; red-breasted merganser; oystercatcher; golden plover; grey plover; lapwing; dunlin; black-tailed godwit; bar-tailed godwit; curlew; redshank; black-headed gull; common gull; lesser black-backed gull; common tern; wetland and waterbirds.
[22] All sites within a 15 km buffer are also shown on Figure 4.2.
[23] The CORINE (Coordinated Information on the Environment) land cover data series was devised as a means of compiling geo-spatial environmental information in a standardised and comparable manner. CORINE has become a key data source for informing environmental and planning policy on a national and European level. The main land cover type in Ireland is agricultural land including forestry, which accounts for two-thirds of the national landmass. Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth of the country. While forested areas cover about one-tenth of the country. Despite rapid development in the past two decades, Ireland's landscape is predominantly rural and agricultural.

Water bodies designated on these lists (mapped on Figure 4.4) include:

- The River Lee which is a surface water listed on the European Communities (Quality of Salmonid) Regulations 1988 (S.I. 293) and intersecting surface and groundwaters.

There are also a number of water dependent habitats in the City that have been listed on RPAs relating to biodiversity but which are not mapped on Figure 4.4 – these relate to designated SACs and SPAs (see Section 4.6.3).

4.6.7 Salmonid Waters

The Salmonid Regulations (S.I. 293/1988) designate the waters capable of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*) as protected. 34 (no.) rivers, tributaries and lakes are listed and protected under these Regulations that prescribe quality standards for salmonid waters, the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. Sections of the River Lee are listed under these Regulations.

4.6.8 Ramsar Sites

Ramsar sites (mapped on Figure 4.5) are wetlands designated to be of international importance under the Convention of Wetlands of International Importance (especially as Water Fowl Habitat), established at Ramsar in 1971 and ratified by Ireland in 1984. The main aim of the Convention is to secure the designation by each contracting state of wetlands in its territory for inclusion in a list of wetlands of international importance for waterfowl. This entails the commitment of each contracting state to a policy of protection and management of the designated wetlands, and of formulating and implementing planning so as to promote the conservation of designated wetlands and, as far as possible, the wise use of wetlands in its territory. Ireland presently has 45 sites designated as Wetlands of International Importance, with surface areas of 66,994 hectares. There is one Ramsar site designated within Cork City: Cork Harbour (to the east of the City).

4.6.9 Other Sites of Ecological Importance

Within and surrounding the City, ecological networks are made up of components including lakes, wetlands, woodlands, trees and hedgerows. These components provide habitats for flora and fauna and facilitate linkages to the surrounding countryside for flora and fauna. Urban habitat surveys carried out for Blarney and Carrigaline Electoral Areas[24] identified and mapped habitats according to their types, their conservation value and other ecological information.

Hedgerows are valuable resource in the countryside, benefiting agriculture, wildlife, the environment, tourism, and the general community. The network of hedges across the country provides links between surviving fragments of other wildlife habitats, thereby allowing the movement and dispersal of species through otherwise hostile agricultural landscapes.

Important Bird Areas are a BirdLife International initiative aimed at identifying and protecting a network of critical sites for the conservation of the world's birds. Cork Harbour (partially within the City) is designated a BirdWatch Ireland Important Bird Area (IBA)[25].

Public parks and open spaces within the City are important for biodiversity in urban settings. These spaces provide habitat for birds, insects and small mammals. Parks also support numerous plants, hedgerows and woodlands, acting as wildlife corridors, connecting habitats in the area.

[24] Cork City Council, *Survey and Mapping of Habitats in the Carrigaline Electoral Area* (2007) and *Blarney Electoral District Habitat Survey Mapping* (2008).

[25] There are 105 IBAs in Ireland.

4.6.10 Existing Problems

Ireland's Article 17 report on the Status of EU Protected Habitats and Species in Ireland (DCHG, 2019) identifies various Irish, EU-protected habitats and species to be of unfavourable status and many to be still declining, although it also identifies that a range of positive actions are underway. Categories for pressures and threats on Ireland's habitats and species identified by the report comprise:

- Agriculture;
- Forestry;
- Extraction of resources (minerals, peat, non-renewable energy resources);
- Energy production processes and related infrastructure development;
- Development and operation of transport systems;
- Development, construction and use of residential, commercial, industrial and recreational infrastructure and areas;
- Extraction and cultivation of biological living resources (other than agriculture and forestry);
- Military action, public safety measures, and other human intrusions;
- Alien and problematic species;
- Mixed source pollution;
- Human-induced changes in water regimes;
- Natural processes (excluding catastrophes and processes induced by human activity or climate change);
- Geological events, natural catastrophes;
- Climate change; and
- Unknown pressures, no pressures and pressures from outside the Member State.

Ireland's Article 12 Birds Directive Reports and the 6th National Report under the Convention of Biological Diversity identify similar issues.

The Plan includes measures to contribute towards the protection of biodiversity and flora and fauna and associated ecosystem services.

Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna however, legislative objectives governing biodiversity and fauna were not identified as being conflicted with.

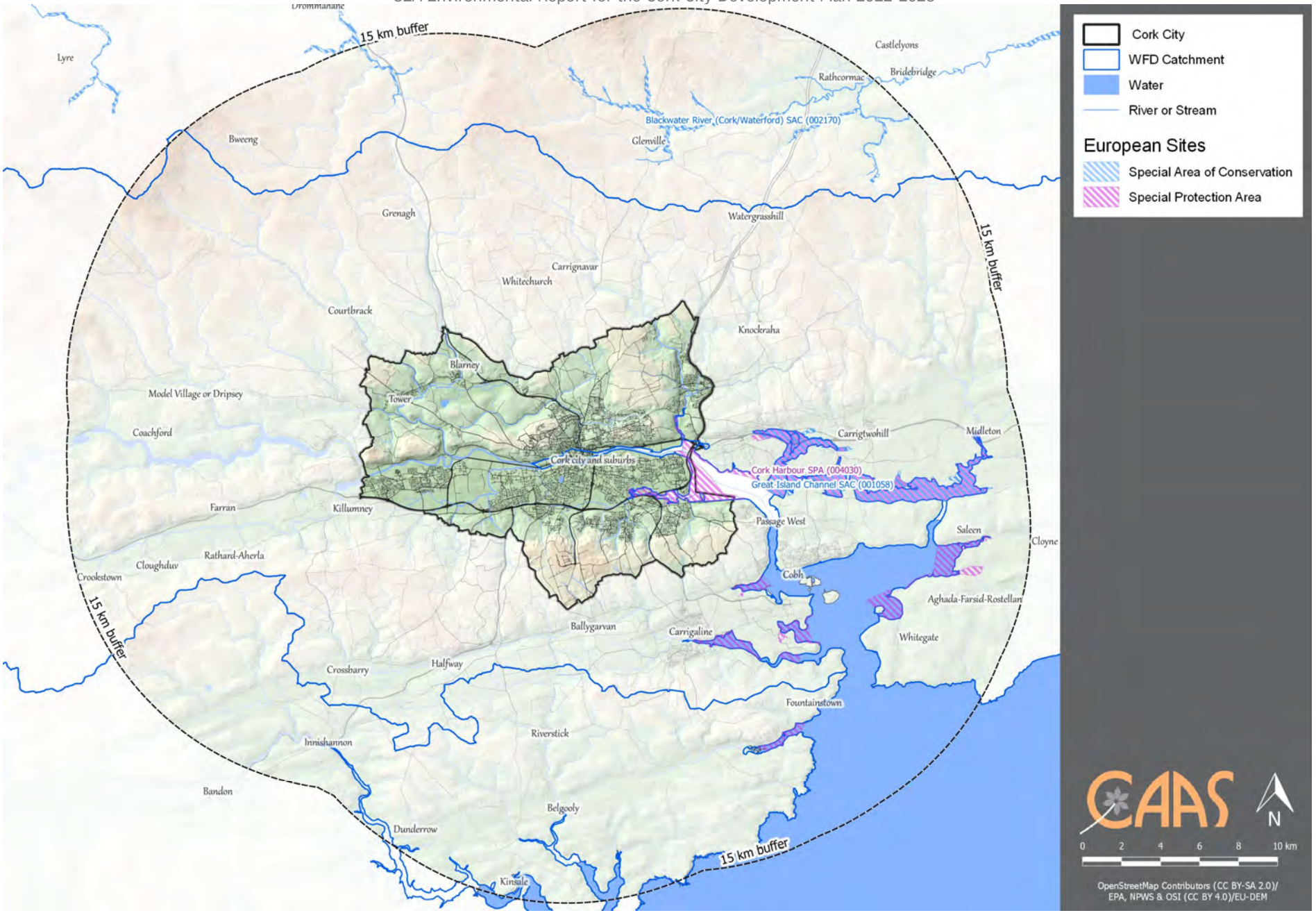

Figure 4.1 European sites within and within 15 km of the City

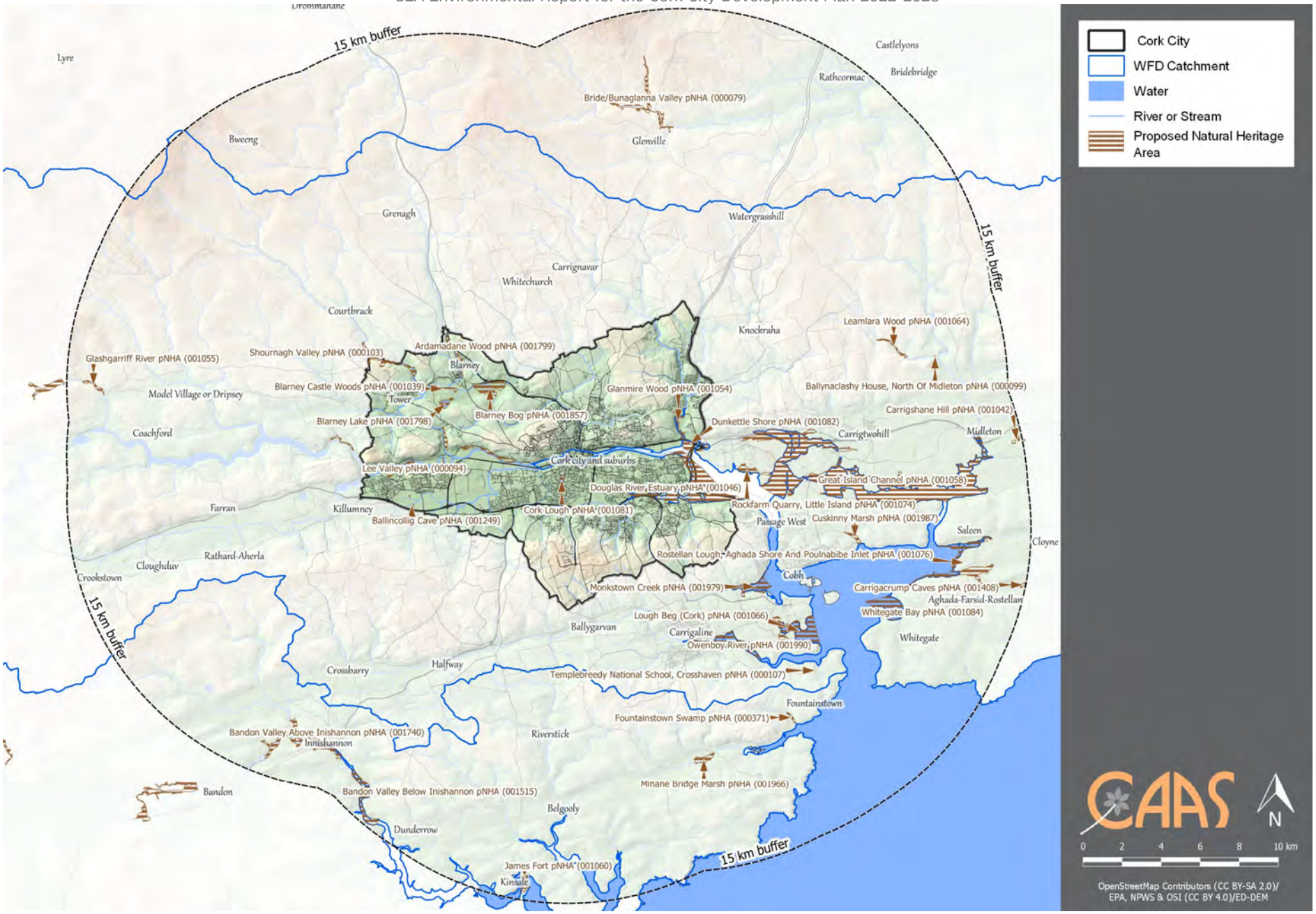

Figure 4.2 Proposed Natural Heritage Areas within and within 15 km of the City

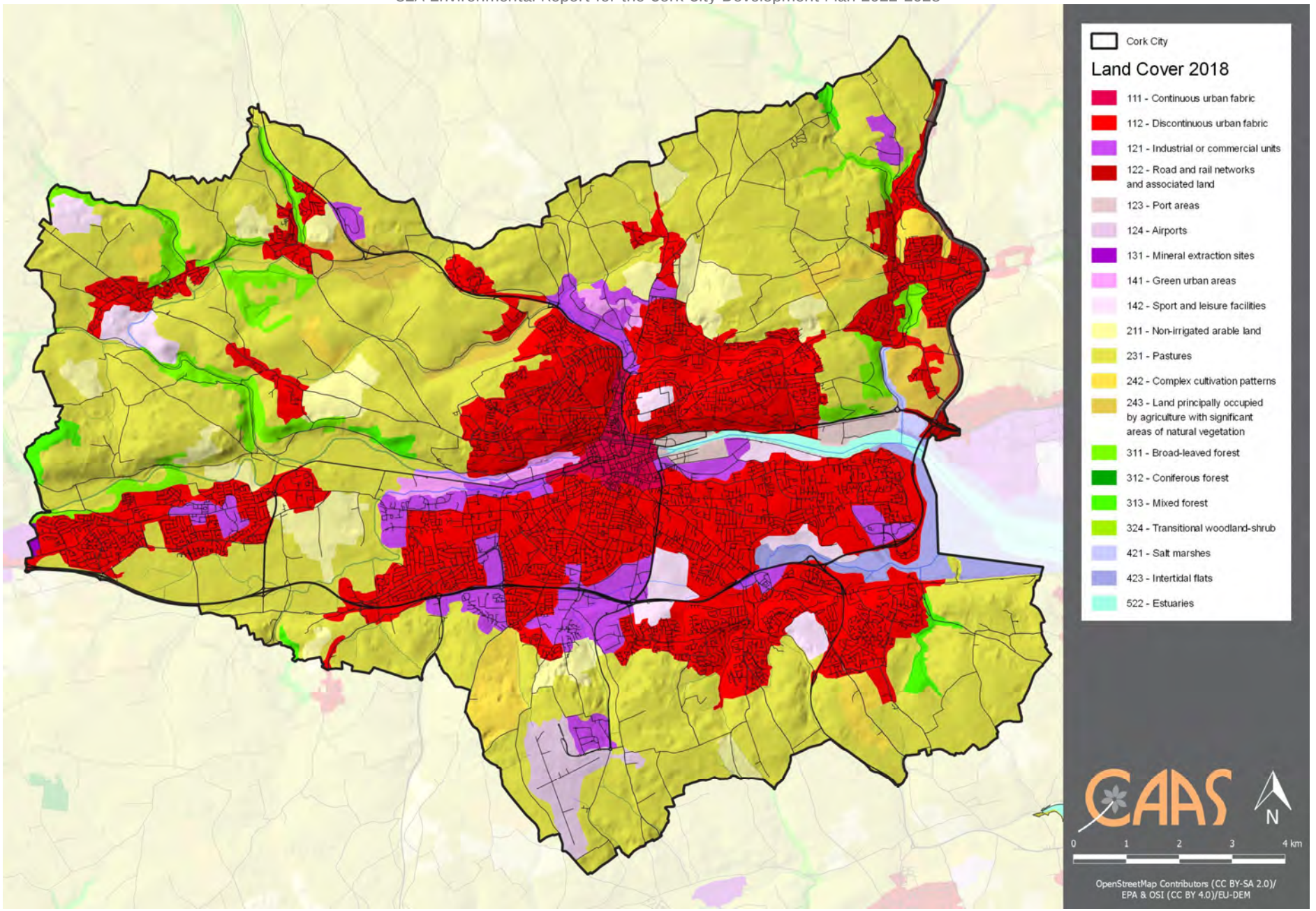

Figure 4.3 CORINE Land Cover 2018

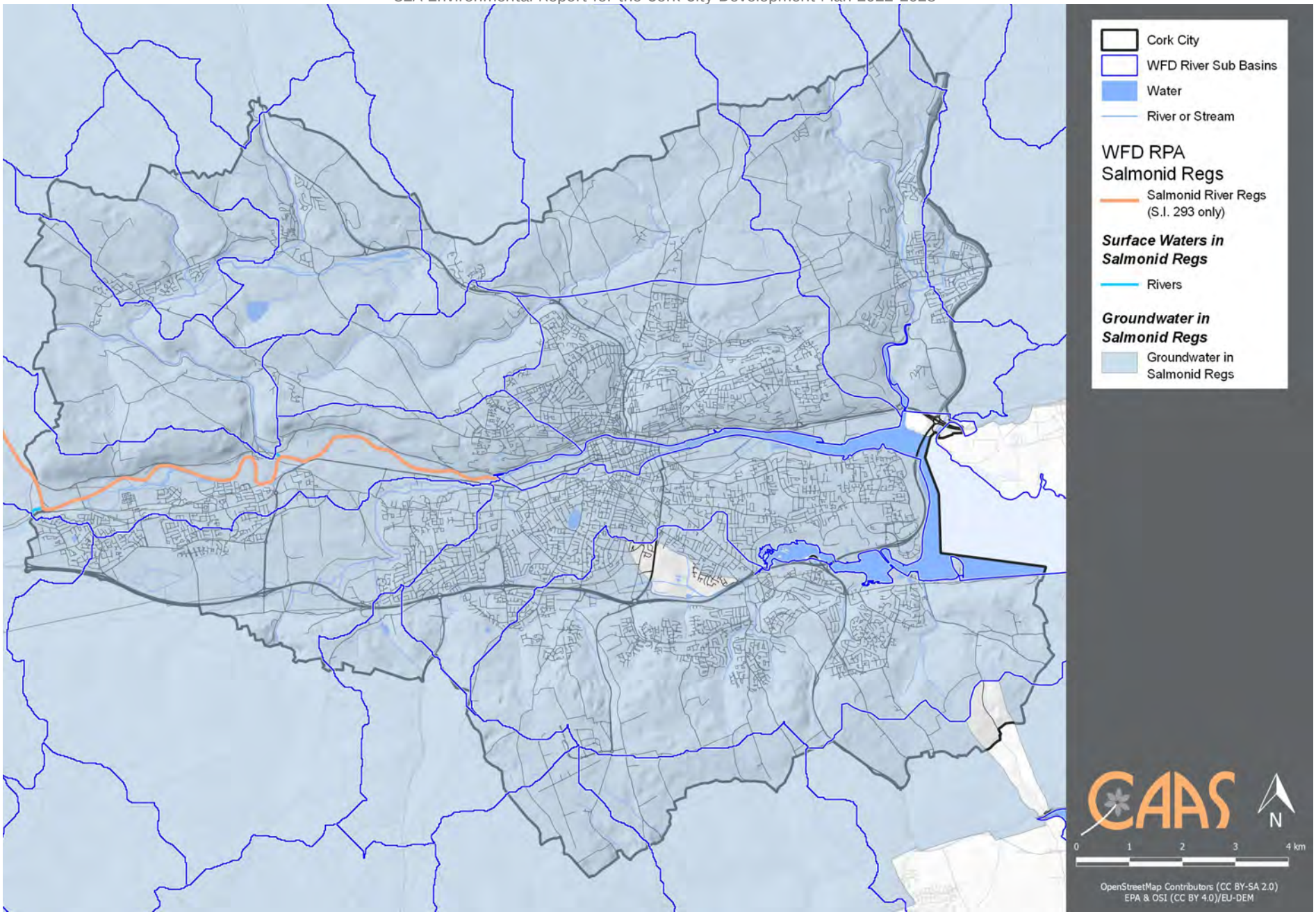

Figure 4.4 WFD Register of Protected Areas: Salmonid Waters

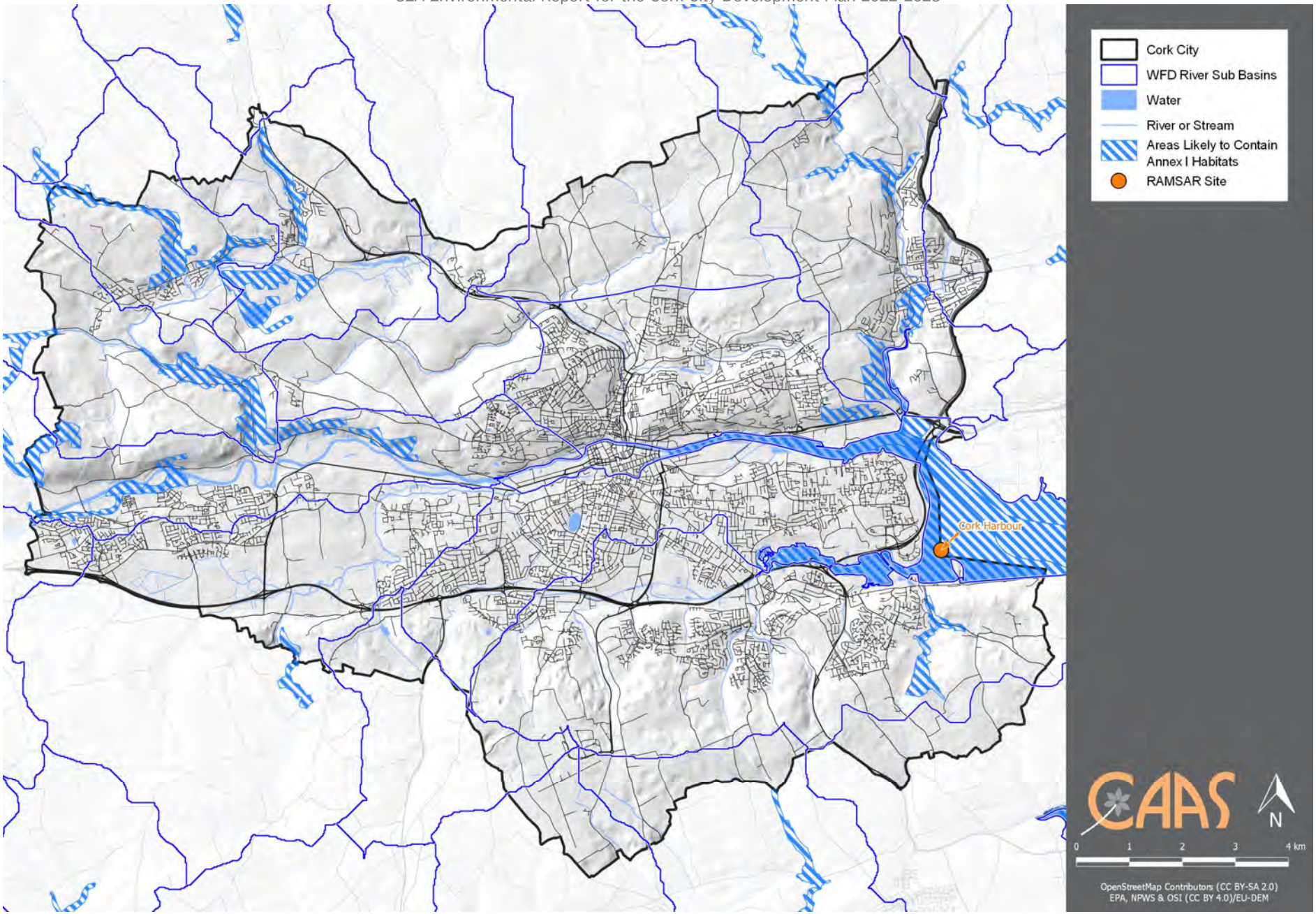

Figure 4.5 Areas Likely tocontain Annex I Habitats and Ramsar Site

4.7 Population and Human Health

4.7.1 Population

In 2016 Census, the total population of the area that is now under the administration of Cork City Council[26] was 210,853 persons, showing an increase since previous census by c. 5.1%. The population growth projections for the City are 257,852 persons by 2028[27] and 274,000-286,000 persons by 2031 (as set out by the NPF and the Southern Regional Spatial Economic Strategy).

Cork City is the largest urban centre in the Southern region and it is recognised by the Regional Spatial Economic Strategy as one of five Metropolitan Areas in Ireland. Cork Metropolitan Area acts as an international location of scale, a complement to Dublin and a primary driver of economic and population growth in the Southern Region.

The Plan designates different City Areas as follows:

- City Centre;
- Docklands (City Docks, Tivoli Docks);
- City Suburbs (North East Suburb, North West Suburb, South East Suburb, South West Suburb);
- Urban Town (Ballincollig, Blarney, Glanmire, Tower); and
- City Hinterland.

The new population provided for by the Plan will interact with various environmental components. Potential interactions include:

- Increase in demand for wastewater treatment at the municipal level;
- Recreational and development pressure on habitats and landscapes;
- Increase in demand for water supply and associated potential impact of water abstraction from the rivers;
- Potential interactions in flood-sensitive areas; and
- Potential effects on water quality.

4.7.2 Human Health

Human health has the potential to be impacted upon by environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Hazards or nuisances to human health can arise as a result of exposure to these vectors arising from incompatible adjacent land uses for example. These factors have been considered with regard to the description of: the baseline of each environmental component; and the identification and evaluation of the likely significant environmental effects of implementing the Plan.

4.7.3 Seveso III Sites

The Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015) (the "COMAH Regulations"), implement the Seveso III Directive (2012/18/EU). The purpose of the COMAH Regulations is to lay down rules for the prevention of major accidents involving dangerous substances, and to seek to limit as far as possible the consequences for human health and the environment of such accidents, with the overall objective of providing a high level of protection in a consistent and effective manner. There are two categories of major accident establishments; Upper Tier and Lower Tier. These are defined based on the volume of the dangerous substances present. There are currently six Seveso sites located within the Cork City Council administrative area.

4.7.4 Existing Problems

There is historic and predictive evidence of flooding in various locations across the City (see information on Strategic Flood Risk Assessment at Section 4.9.8).

The greatest health risk from radiation in Ireland is caused by radon. The presence of radon gas, a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils, occurs across the country. It accounts for more than half of the total radiation dose received by the Irish population. As a known carcinogen, in the same category as tobacco smoke and asbestos it is a cause of lung cancer. Exposure to radon for long periods or at high concentrations can lead to lung

[26] In 2019, the Cork City expanded to approx. five times its former size and the population of the City grew by c. 85,000. The Cork City boundary was expanded to include the areas of Douglas, Rochestown, Ballincollig, Tower, Blarney, Glanmire and Cork Airport.

[27] Cork City Development Plan 2022-2028

cancer. The number of homes within the City with radon levels above the reference level is within the normal range experienced in other locations across the country[28].

Information on the status of groundwaters and surface waters is provided under Section 4.9 while compliance issues in relation to water services are detailed under Section 4.11.10.

4.8 Soil

Soil is the top layer of the earth's crust. It is formed by mineral particles, organic matter, water, air and living organisms. Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is a complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic and environmental importance. Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action.

To date, there is no legislation which is specific to the protection of soil resources. Although a proposal for a Soil Framework Directive was withdrawn in 2014, the importance of sustainable soil management was recognised in the Seventh Environment Action Programme.

Urban soils (underlying the City Centre) and brown earths[29] (to the north, south and west of the City Centre) are the two most dominant soil types in Cork City (shown on Figure 4.6).

Active blanket bogs and active raised bogs are considered to be priority habitats, listed on Annex I of the EU Habitats Directive. Ombrotrophic (rain-fed) and minerotrophic (groundwater fed) peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues. There is an area of peat soil identified in the north-west of the City.

Other soil types (shown on Figure 4.6) identified within the City include:

- Alluvial soils[30] (in the flood plains of rivers and streams and estuaries);
- Groundwater gleys[31] (in the south-east of Cork City); and
- Brown podzols[32] (mainly in the north, north-east and north-west of Cork City).

Outcropping rock is identified within a number of locations and throughout the City area.

The GSI (Geological Survey of Ireland) have a suite of data sources available that would be useful in planning and assessing individual projects with regard to the environmental topic(s) of soil and/or material assets. These include:

- Aggregate Potential Mapping;
- Bedrock mapping;
- GeoUrban Bedrock;
- Quaternary and Physiographic mapping;
- 3D Quaternary Models;
- National Aquifer and Recharge mapping; and
- Geochemistry and Geophysical datasets.

4.8.1 Geological Sites

Geological Survey of Ireland coordinates the Irish Geological Heritage Programme, which seeks to identify and select sites of geological interest within administrative areas across the country. The audit of Geological Sites in Cork City has not yet been completed. There are two Sites of Geological Interest (mapped on Figure 4.7) identified within the area of Cork City: Blackrock Diamond Quarry and St. Joseph's Section on Lee Road.

4.8.2 Potentially contaminated lands and landfill sites

In the absence of mitigation, contaminated materials have the potential to adversely impact upon human health, water quality and habitats and species.

[28] Mapping available at http://www.epa.ie/radiation/radonmap
[29] Well drained mineral soils, associated with high levels of natural fertility.
[30] These are associated with alluvial (clay, silt or sand) river deposits.
[31] Wetland soils with slowly permeable horizons resulting in seasonal waterlogging.
[32] Characterised by dark brown humus-mineral soil covered with a thin mat of partly decayed leaves.

As is the case with other areas across the country, there is potential for contamination at sites within Cork City, especially where land uses occurred in the past in the absence of environmental protection legislation. Such contamination has the potential to affect water quality, biodiversity and flora and fauna and human health. Under the Plan (Chapter 11), where brownfield redevelopment is proposed, adequate and appropriate investigations are required to be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work.

4.8.3 Landslides

The term "landslide" describes a wide variety of processes that result in the downward and outward movement of materials such as rock, debris, earth, mud and peat under the force of gravity. Issues such as existing ground conditions, slope stability and storage of excavated material have the potential to influence susceptibility to landslides/bog bursts. The potential impacts of landslides include loss of human life/injury, flooding, pollution of watercourses and impacts upon aquatic biodiversity.

Geological Survey of Ireland have identified that most of the City has relatively low levels of landslide susceptibility, with moderate to high susceptibility found mainly along steep river valleys in the centre, north and south of the City (as mapped on Figure 4.8).

4.8.4 Existing Problems

Legislative objectives governing soil were not identified as being conflicted with.

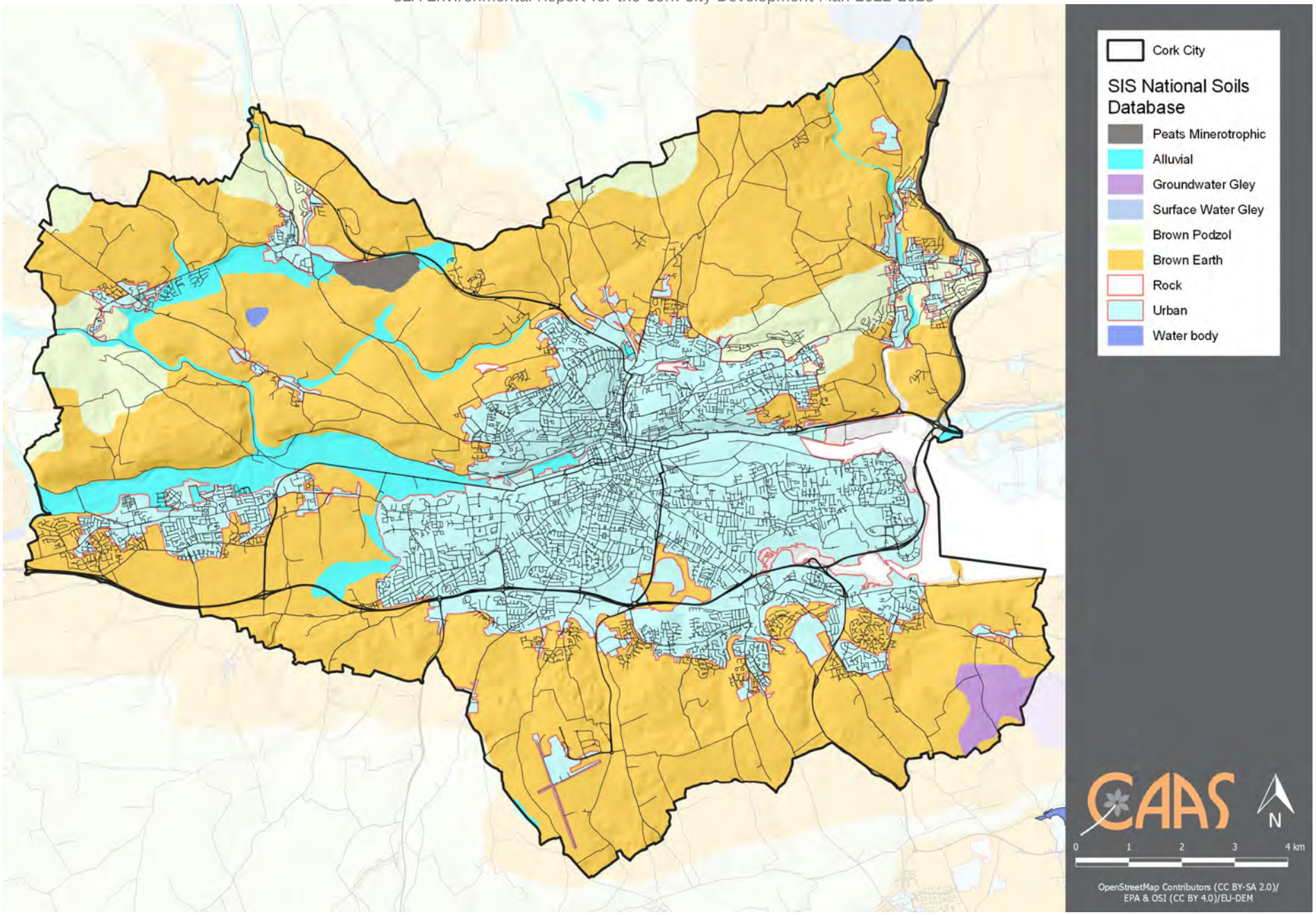

Figure 4.6 Soil Type
CAAS for Cork City Council

Figure 4.7 Sites of Geological Interest

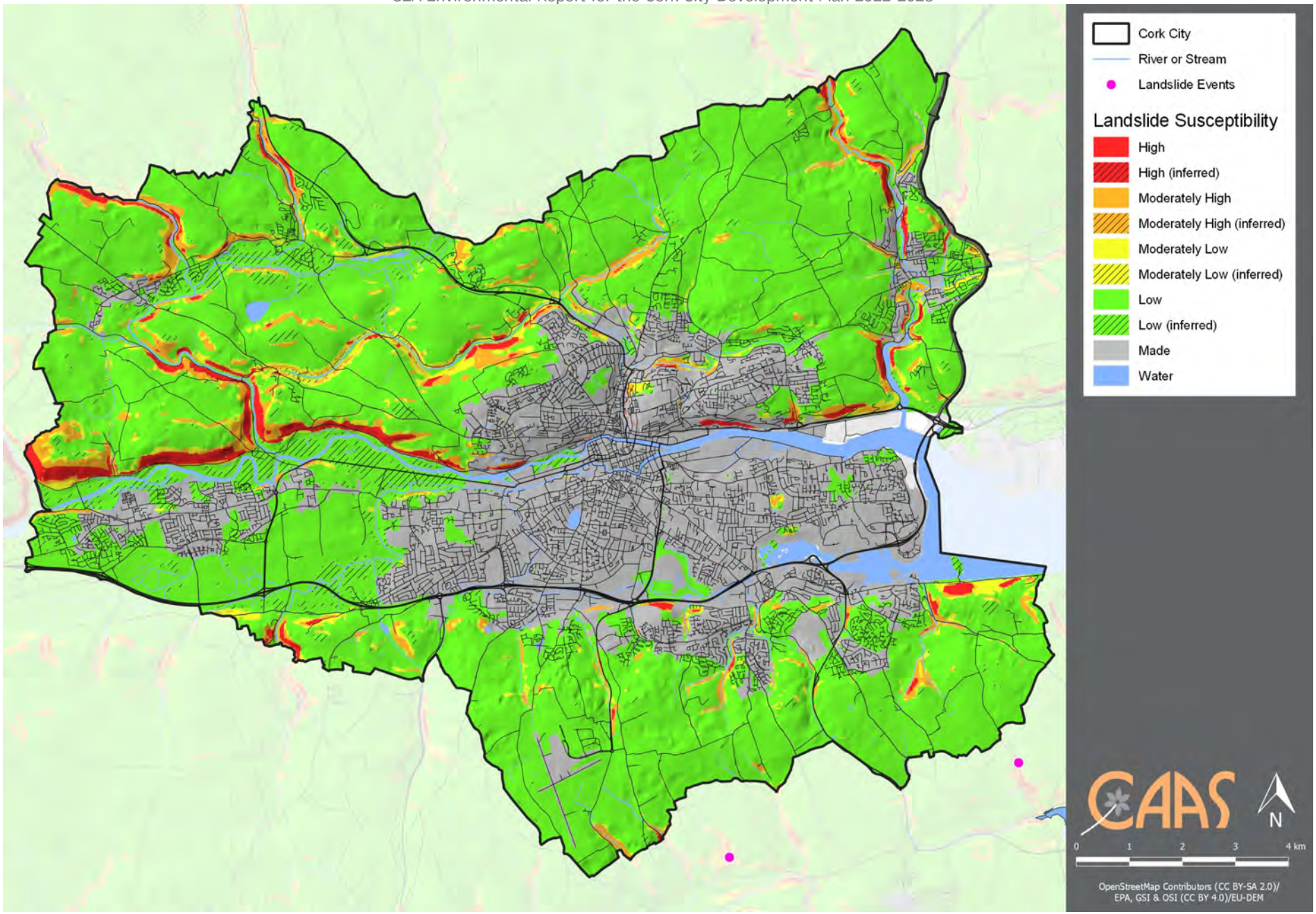

Figure 4.8 Landslide Susceptibility and Previous Landslide Events

4.9 Water

4.9.1 The Water Framework Directive

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving good status. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and improve polluted water bodies to good status.

Article 4 of the WFD sets out various exemptions for deterioration in status caused as a result of certain physical modifications to water bodies. This is provided: all practicable mitigation measures are taken; there are reasons of overriding public interest or the benefits to human health, safety or sustainable development outweigh the benefits in achieving the WFD objective; there are no better alternatives; and the reasons for the physical modification are explained in the River Basin Management Plan.

The EU's Common Implementation Strategy Guidance Documents No. 20 and 36 provide guidance on exemptions to the environmental objectives of the WFD.

For the purpose of assessment, reporting and management, water is divided into groundwater, rivers, lakes, estuarine waters and coastal waters that are in turn divided into specific, clearly defined water bodies.

4.9.2 Zone of Influence

The zone of influence of the Plan beyond the City boundary, with respect to impacts upon waters can be estimated to be all bodies of groundwater and all surface waters downstream areas of catchments that drain the City.

4.9.3 Surface Water Drainage

A catchment is an area of land contributing to a waterbody, with all the water ultimately running off to a single outlet. The WFD requires water quality management to be based on natural river catchments i.e. by reference to the natural, environmental unit rather than by reference to administrative or legal boundaries, which often fragment river catchments.

The City lies within the catchment of Lee, Cork Harbour and Youghal Bay. This catchment includes the area drained by the River Lee and all streams entering tidal water in Cork Harbour and Youghal Bay and between Knockaverry and Templebreedy Battery.

The main river within Cork City is the River Lee running west to east. Other waterbodies within the City include the Rivers Blackwater and Bandon, Glashaboy Estuary, Lee Estuary and Lough Mahon.

4.9.4 Surface Water Status

The WFD defines 'overall surface water status' as the general expression of the status of a body of surface water, determined by the poorer of its ecological status and its chemical status. Thus, in order to achieve 'good surface water status' both the ecological status and the chemical status of a surface water body need to be at least 'good'.

Ecological status is an expression of the structure and functioning of aquatic ecosystems associated with surface waters. Such waters are classified as of 'good ecological status' when they meet Directive requirements.

Chemical Status is a pass/fail assignment with a failure defined by a face-value exceedance of an Environmental Quality Standards (EQS) for one or more Priority Action Substances (PAS) listed in Annex X of the Water Framework Directive (WFD). The EQS values for individual PAS substances are set at European level. Good surface water chemical status means that concentrations of pollutants in the water body do not exceed the environmental limit values specified in the Directive.

The WFD surface water status (2013-2018), for rivers, lakes and transitional waters within and surrounding the City is shown on Figure 4.9 and

on Table 4.1. The WFD status of sections[33] of rivers within the City is classified as *moderate* (including Shournagh, Owenboy, Martin, Lee and Blarney) and *good* (including Martin, Glashaboy and Butlerstown). The WFD surface water status (2013-2018) of transitional waterbodies within and surrounding the City is identified as *moderate* (including Lough Mahon and Lee - Cork Estuary Upper) and *good* (including Glashaboy Estuary).

The WFD surface water status (2013-2018) downstream of Cork City is shown on Figure 4.10. The Outer Cork Harbour (downstream of Cork City) is identified as being of *good* status, Cork Harbour is identified as being of *moderate* status, Lower Bandon Estuary (transitional waterbody) is identified as being of *poor* status and Cuskinny Lake (transitional waterbody) is identified as being of *bad* status. The bathing water at Fountainstown (downstream of Cork City) is of *excellent* water quality[34].

Significant pressures, those pressures which need to be addressed in order to improve water quality, have been identified[35] for waterbodies that are 'At Risk' of not meeting their water quality objectives under the WFD. Significant pressures for surface water bodies within or adjacent to Cork City are identified on Table 4.1. There are various types of pressures identified, including:

- **Agricultural pressures** - can include issues related to farming including loss of excess nutrients and sediment loss to surface waters from diffuse sources such as spreading of fertilisers and manures. Excess phosphorous and sediment are typically issues for rivers and lakes, and too much nitrogen is the main issue for estuaries and coastal waters.

- **Urban run-off pressures** - can include leaking sewers and run-off from paved and unpaved areas and misconnections where private foul connections are connected to storm sewers instead of the foul sewer network.

- **Urban wastewater pressures** - can include direct discharge of nutrients from urban wastewater treatment plants and discharge from combined storm overflows or storm water overflows. Discharges of elevated concentrations of phosphorus, ammonium and nitrogen impact on the ecology of surface waters.

- **Hydromorphological and anthropogenic pressures** are identified together in many instances. Hydromorphological pressures can include: modifications to the physical habitat conditions or the natural functioning of a waterbody which can impact on ecology, caused by dredging and straightening of rivers (channelisation), land drainage or hard infrastructure such as dams, weirs, culverts or other obstructions. Anthropogenic pressures can include: water abstractions; invasive species; agriculture; use of fertilizers, manures and pesticides; animal husbandry activities; inefficient irrigation practices; deforestation of woods; aquaculture; pollution due to industrial effluents and domestic sewage; and recreational activities.

- **Industrial pressures** - can include discharges and emissions from industrial and commercial facilities.

[33] As per EPA classification system (gis.epa.ie/EPAMaps)
[34] The EPA Report (2020) Bathing Water Quality in Ireland 2019.
[35] EPA (2019): Report on Water Quality in Ireland 2013-2018

Table 4.1 WFD River, Lake and Transitional Waterbodies Status[36]

Waterbody Name (EPA Identification Code)[37]	Waterbody Type	WFD Surface Waterbody Status (2013 -2018)[38]
Shournagh_040	**River**	**Moderate.** No pressures identified.
Shournagh_030	**River**	**Moderate.** No pressures identified.
Owenboy (Cork)_040	**River**	**Moderate.** This waterbody is identified as being **under pressure from hydromorphological/anthropogenic sources.**
Martin_040	**River**	**Moderate.** This waterbody is identified as being **under pressure from urban run-off sources.**
Lee (Cork)_090	**River**	**Moderate.** No pressures identified.
Blarney_010	**River**	**Moderate.** This waterbody is identified as being **under pressure from urban wastewater sources.**
Lough Mahon	**Transitional**	**Moderate.** This waterbody is identified as being **under pressure from urban wastewater sources.**
Lee (Cork) Estuary Upper	**Transitional**	**Moderate.** This waterbody is identified as being **under pressure from urban wastewater and urban run-off sources.**
Lee (Cork) Estuary Lower	**Transitional**	**Moderate.** This waterbody is identified as being **under pressure from urban wastewater and urban run-off sources.**
Martin_030	**River**	**Good**. No pressures identified.
Glashaboy (Lough Mahon)_030	**River**	**Good**. No pressures identified.
Glashaboy (Lough Mahon)_020	**River**	**Good**. No pressures identified.
Butlerstown_030	**River**	**Good**. No pressures identified.
Glashaboy Estuary	**Transitional**	**Good**. This waterbody is identified as being **under pressure from agricultural and urban run-off sources.**
Bride (Cork City)_010	**River**	**Unassigned.** This waterbody is identified as being **under pressure from hydromorphological/anthropogenic and urban run-off sources.**
Bride (Cork City)_020	**River**	**Unassigned.** This waterbody is identified as being **under pressure from urban run-off sources.**
Curragheen (Cork City)_010	**River**	**Unassigned.** This waterbody is identified as being **under pressure from hydromorphological/anthropogenic sources.**
Glasheen (Cork City)_010	**River**	**Unassigned.** This waterbody is identified as being **under pressure from hydromorphological/anthropogenic sources.**
Glennamought Trib Bride_010	**River**	**Unassigned.** This waterbody is identified as being **under pressure from urban run-off sources.**
Hilltown_010	**River**	**Unassigned.** This waterbody is identified as being **under pressure from urban run-off and industrial sources.**
Moneygurney_010	**River**	**Unassigned.** This waterbody is identified as being **under pressure from hydromorphological/anthropogenic sources.**
Owenboy (Cork)_030	**River**	**Unassigned.** This waterbody is identified as being **under pressure from hydromorphological/anthropogenic sources.**
Two Pot (Cork City)_010	**River**	**Unassigned.** This waterbody is identified as being **under pressure from hydromorphological/anthropogenic sources.**

[36] Source: https://gis.epa.ie/EPAMaps/ and https://gis.epa.ie/EPAMaps/Water.
[37] The number at the end of each river water body name indicates where the waterbody is located along the main river channel. For example, the waterbody at the source is coded '_010', the next waterbody downstream is coded '_020' and the final waterbody before the river becomes transitional is '_180'.
[38] There is a data gap relating to WFD surface water status data. There are a number of waterbodies within the Plan area with overall status currently not assigned to them and the term "*unassigned status"* applies in respect of these waterbodies.

4.9.5 Ground Water

Groundwater is stored in the void spaces in underground layers of rock, or aquifers. These aquifers are permeable, allowing both the infiltration of water from the soils above them and the yielding of water to surface and coastal waters. Groundwater is the part of the subsurface water that is in the saturated zone - the zone below the water table, the uppermost level of saturation in an aquifer at which the pressure is atmospheric, in which all pores and fissures are full of water.

For groundwater bodies, the approach to classification is different from that for surface water. For each body of groundwater, both the chemical status and the quantitative must be determined. Both have to be classed as either *good* or *poor*. The WFD sets out a series of criteria that must be met for a body to be classed as good chemical and quantitative status.

The WFD status (2013-2018) of groundwater underlying the City is mostly identified as being of *good* status, with an area of *poor*[39] status underlying Tramore Valley Park to the south of Cork City Centre (as shown on Figure 4.11).

4.9.6 Aquifer Vulnerability and Productivity

The Geological Survey of Ireland (GSI) rates groundwaters according to both their productivity and vulnerability to pollution.

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The vulnerability of aquifers underlying the City are mapped on Figure 4.12 and generally classified as being of:

- *Extreme, high and moderate*, throughout the City; and
- *Rock at or near surface or karst* mainly in the north, north-west and south of the City.

The GSI also rates aquifers based on the hydrogeological characteristics and on the value of the groundwater resource. This is referred to as aquifer productivity and is mapped on Figure 4.13. Productivity classifications within the City include:

- *Regionally important aquifer karstified (diffuse);*
- *Locally important aquifer bedrock which is moderately productive only in local zones;*
- *Locally important aquifer karstified;* and
- *Regionally important gravel aquifer*.

4.9.7 WFD Registers of Protected Areas

The WFD requires that Registers of Protected Areas (RPAs) are compiled for a number of water bodies or part of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife.

The WFD requires that these RPAs contain: areas from which waters are taken for public or private water supply schemes; designated shellfish production areas; bathing waters; areas which are affected by high levels of substances most commonly found in fertilizers, animal and human wastes - these areas are considered nutrient sensitive; areas designated for the protection of habitats or species e.g. Salmonid areas; Special Areas of Conservation (SACs); and Special Protection Areas (SPAs).

Entries to the RPAs within and adjacent to the City designated by virtue of their value to humans comprise:

- Nutrient Sensitive Areas[40] - lakes and estuaries (as shown on Figure 4.14) including Lee Estuary /Lough Mahon;
- Surface Water and Groundwater[41] in Nutrient Sensitive Areas (as shown on Figure 4.14); and
- Drinking Water Surface Water Bodies[42] (shown on Figure 4.15). Groundwater beneath the entire City is also included.
- Shellfish areas: In order to protect existing shellfish waters and to ensure the future protection of these areas, the European Union introduced the Shellfish Waters Directive (2006/113/EC). The purpose of this Directive is to put in place concrete measures to protect waters, including shellfish waters, against pollution and to safeguard certain shellfish populations from various harmful consequences, resulting from the discharge of pollutant

[39] Area underlying Waste Facility (W0012-03).
[40] Areas designated as sensitive under the Urban Wastewater Treatment Directive (91/271/EEC) and and transposing Regulations.
[41] Groundwater bodies that intersect with areas designated as sensitive.
[42] Various water bodies are used for drinking water abstraction in accordance with European Communities (Drinking Water) (No. 2) Regulations 2007 (SI No. 278/2007).

substances into the sea. The Directive applies to the aquatic habitat of bivalve and gastropod mollusks only (includes oysters, mussels, cockles, scallops and clams). It does not include crustaceans such as lobsters, crabs and crayfish. There are four Shellfish Areas downstream of the Plan area: Cork Great Island North Channel; Rostellan North; Rostellan South; and Rostellan West.

There are also a number of RPAs in the City designated by virtue of their value to biodiversity - these are addressed under Section 4.6.6.

4.9.8 Flooding

Certain areas across the City are at risk from flooding from sources including groundwater, pluvial[43], fluvial[44] and coastal[45]. There is historic evidence of flooding in various locations across the City, including along the Rivers Blackwater, Bandon and Lee, Glashaboy Estuary, Lee Estuary and Lough Mahon. Predictive OPW Preliminary Flood Risk Assessment mapping for the City is shown on Figure 4.16[46], indicating areas likely to be at most risk of flooding.

Locations within and adjacent to the City that were identified by the Office of Public Works (OPW) in 2012 as requiring detailed assessment of flood risk (Areas for Further Assessment) include: Glanmire; Cork City; Douglas; Togher; and Tower. Detailed predictive flood risk mapping is now available for these areas.

A Strategic Flood Risk Assessment (SFRA), as required by 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG and OPW, 2009), has been undertaken alongside the preparation of the SEA and the preparation of the Plan. This assessment has considered available and emerging information on historical and predictive flood risk indicators.

4.9.9 Existing Problems

Subject to exemptions provided for by Article 4 of the WFD, based on available water data, certain surface and groundwater bodies will need improvement in order to comply with the objectives of the WFD.

The Plan includes provisions that will contribute towards improvements in the status of waters.

There is historic and predictive evidence of elevated levels of flood risk from fluvial and coastal sources at various locations across the City.

[43] Resulting from high intensity rainfall events where run-off volume exceeds capacity of surface water network.

[44] Watercourse capacity is exceeded or the channel is blocked and excess water spills from the channel onto adjacent floodplains.

[45] Resulting from higher sea levels than normal causing the sea to overflow onto land. Such flooding is influenced by high tide level, storm surges and wave action.

[46] This mapping shows the likelihood of flooding from a number of sources, defined as the percentage probability of a flood occurring in any given year. For example, a 1% Annual Exceedance Probability (AEP) indicates the severity of a flood that is expected to be exceeded on average once in 100 years, i.e. it has a 1 in 100 (1%) chance of occurring in any one year.

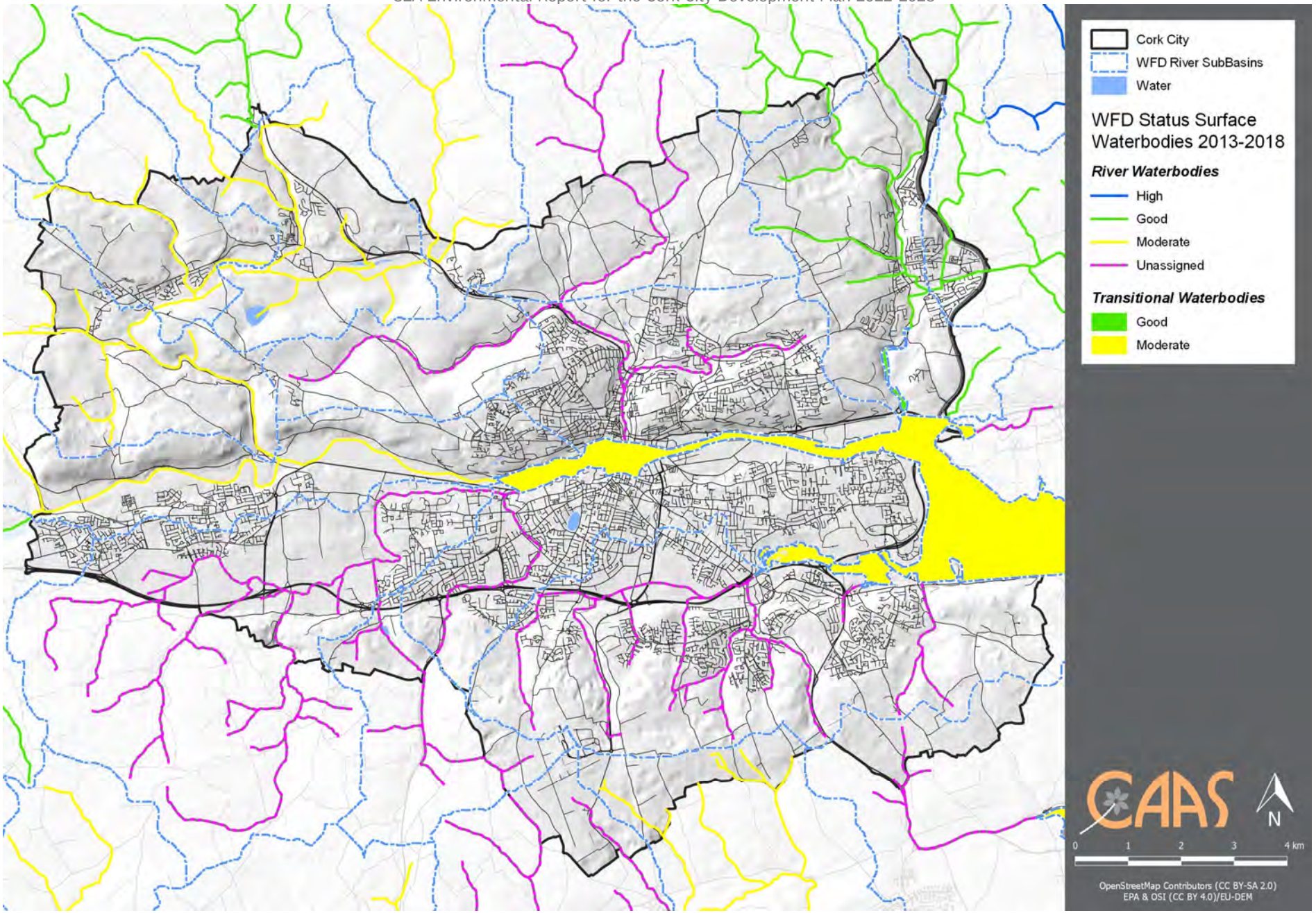

Figure 4.9 WFD Surface Water Status (2013-2018) within Cork City

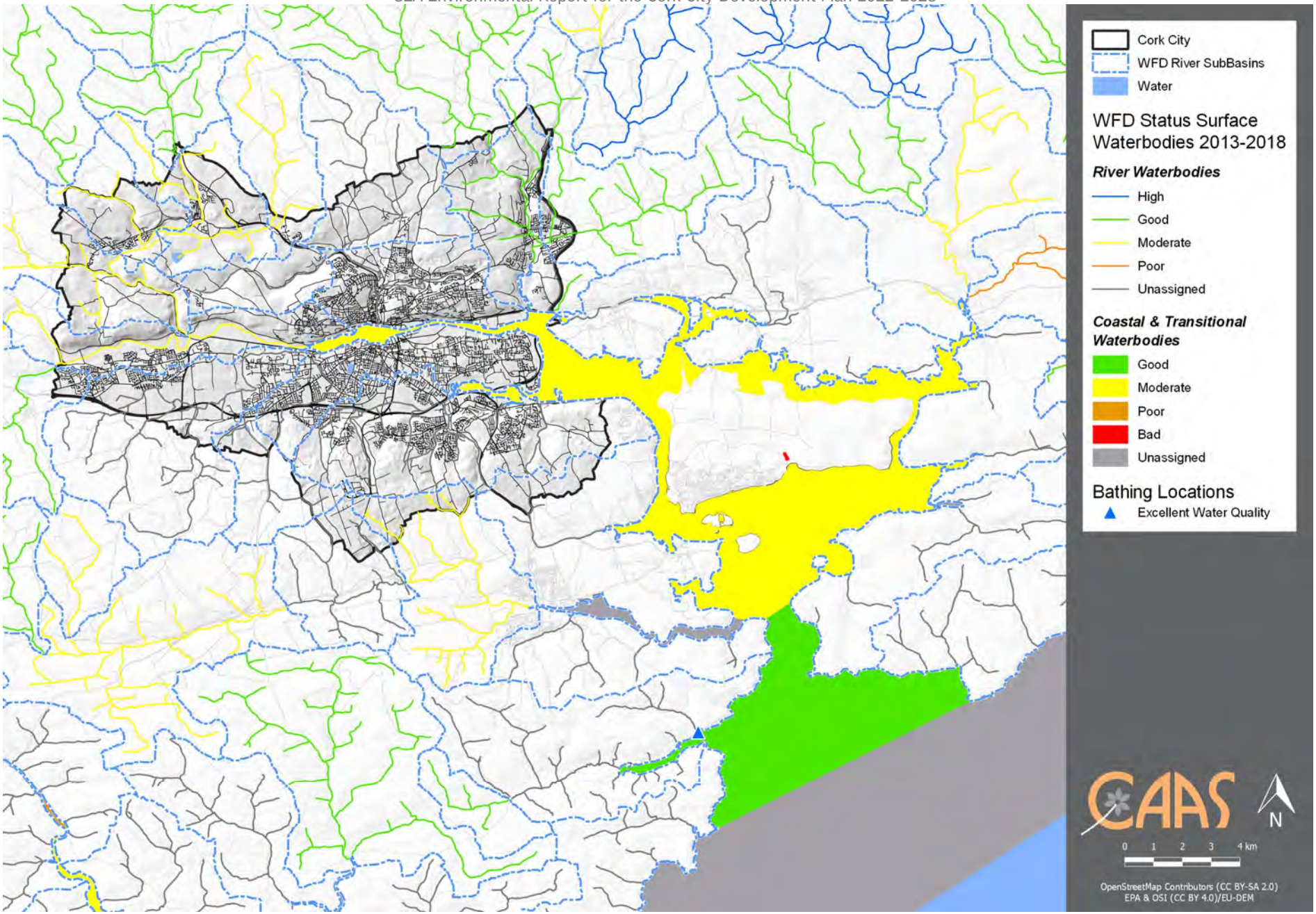

Figure 4.10 WFD Surface Water Status (2013-2018) downstream of Cork City

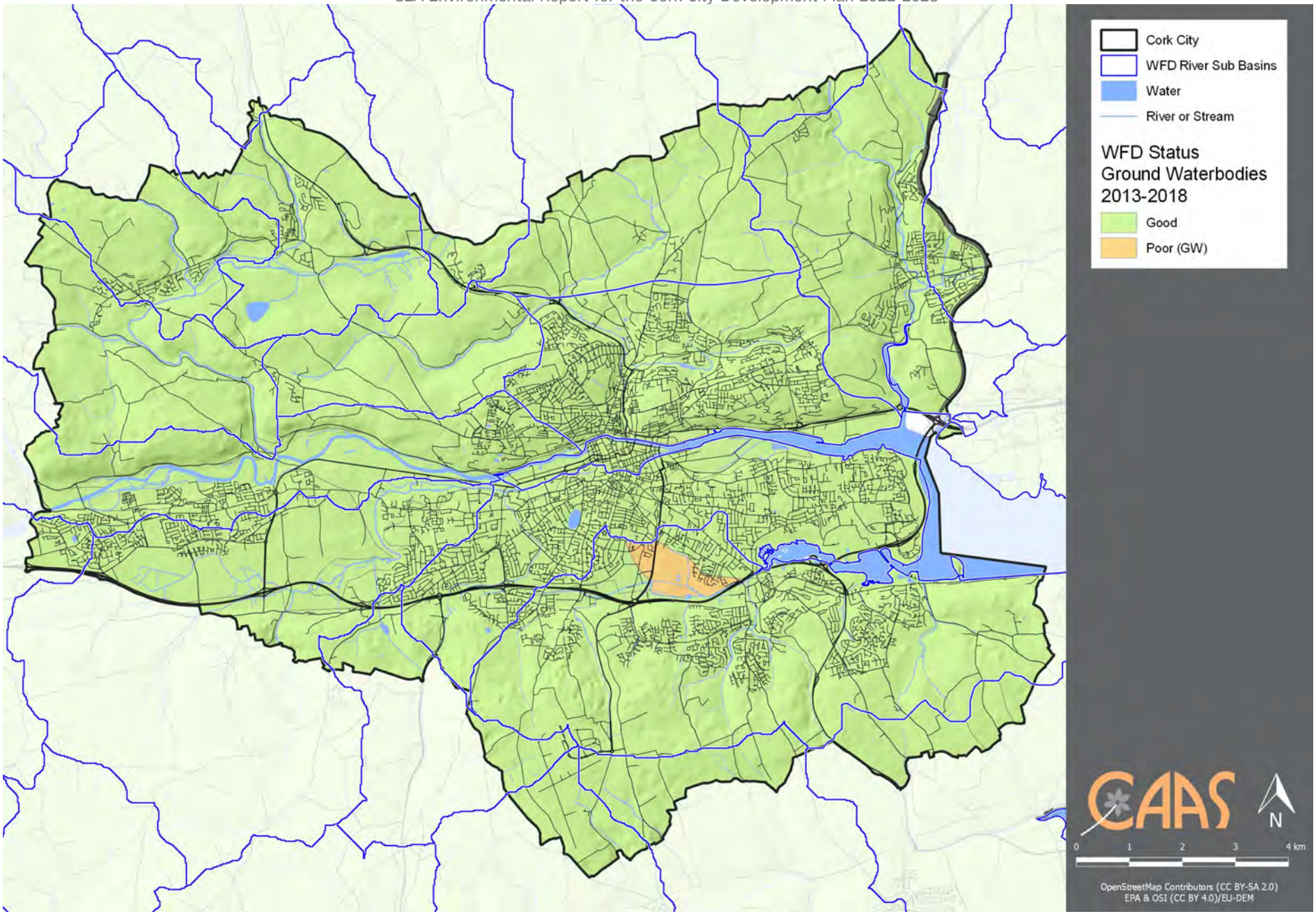

Figure 4.11 WFD Groundwater Status (2013-2018)

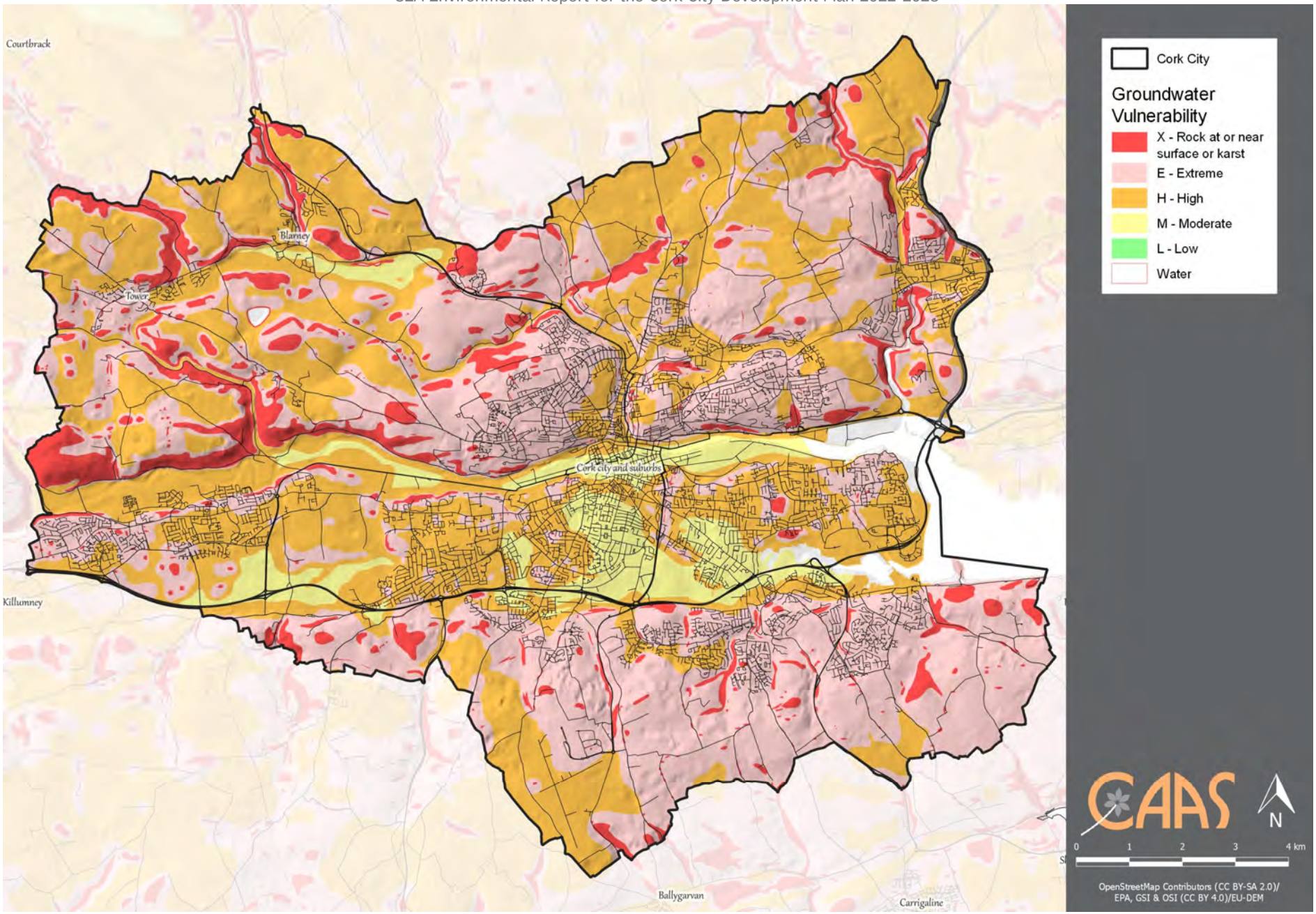

Figure 4.12 Groundwater Vulnerability (GSI)

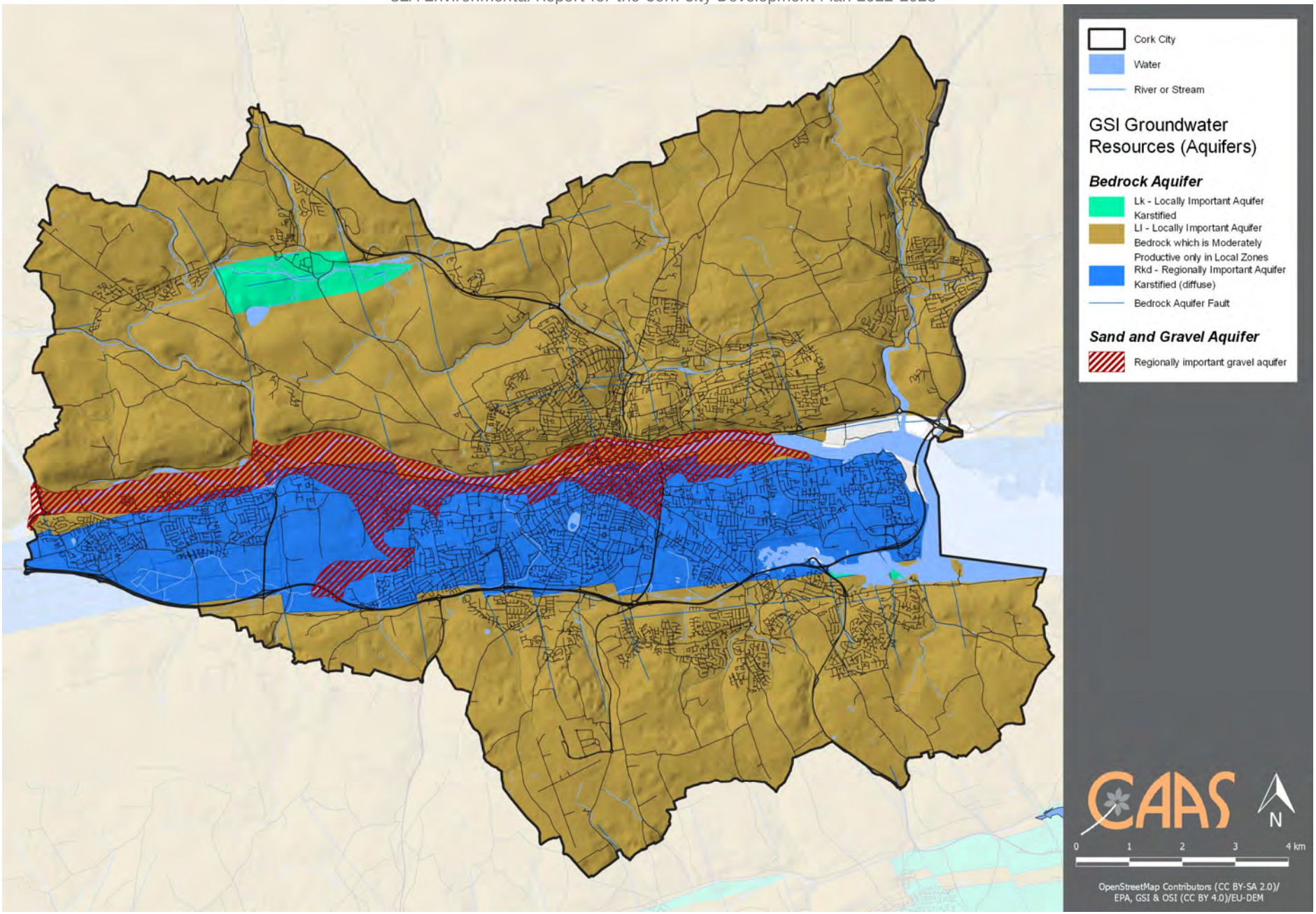

Figure 4.13 Groundwater Productivity (GSI)

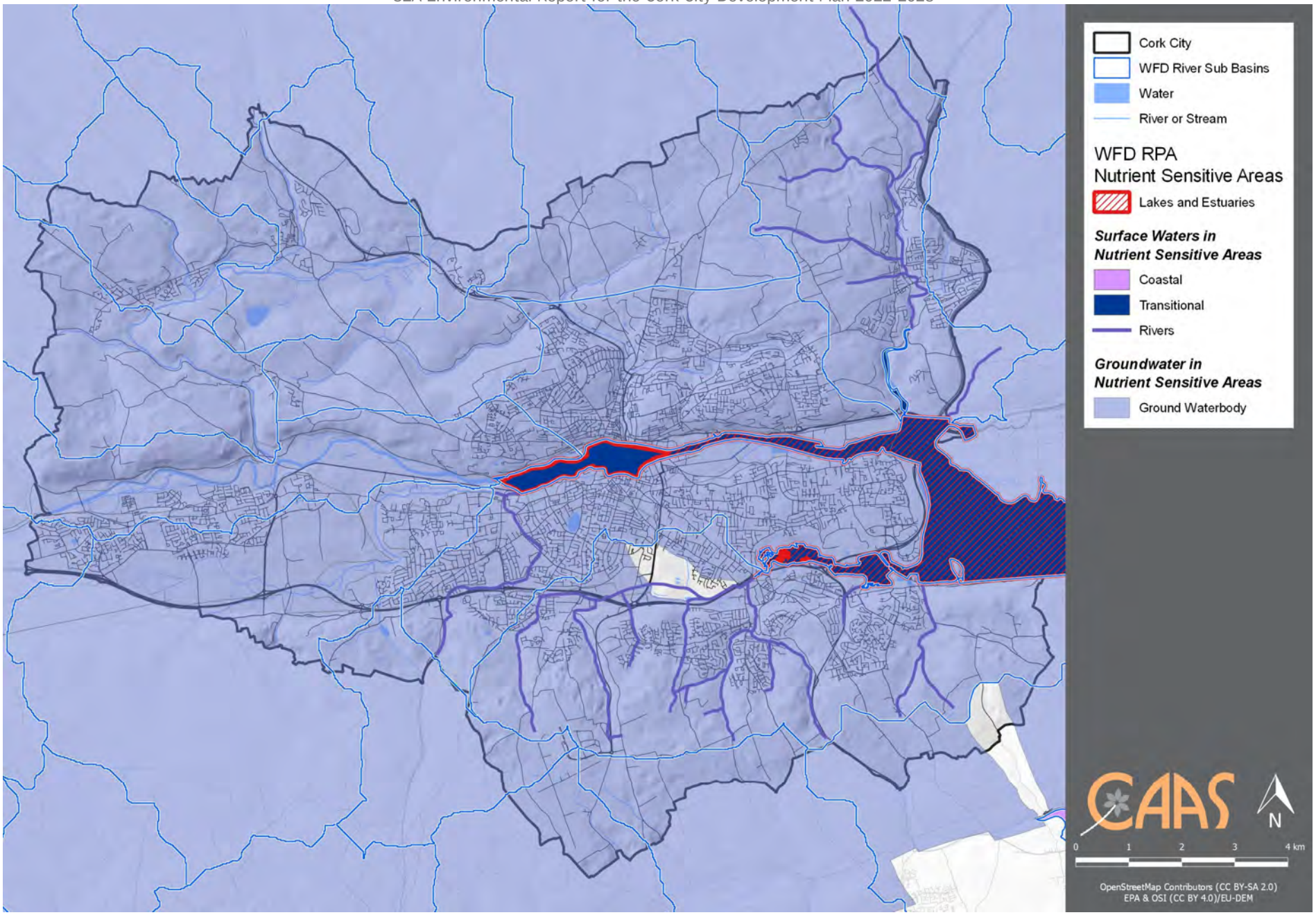

Figure 4.14 WFD Register of Protected Areas: Nutrient Sensitive Areas

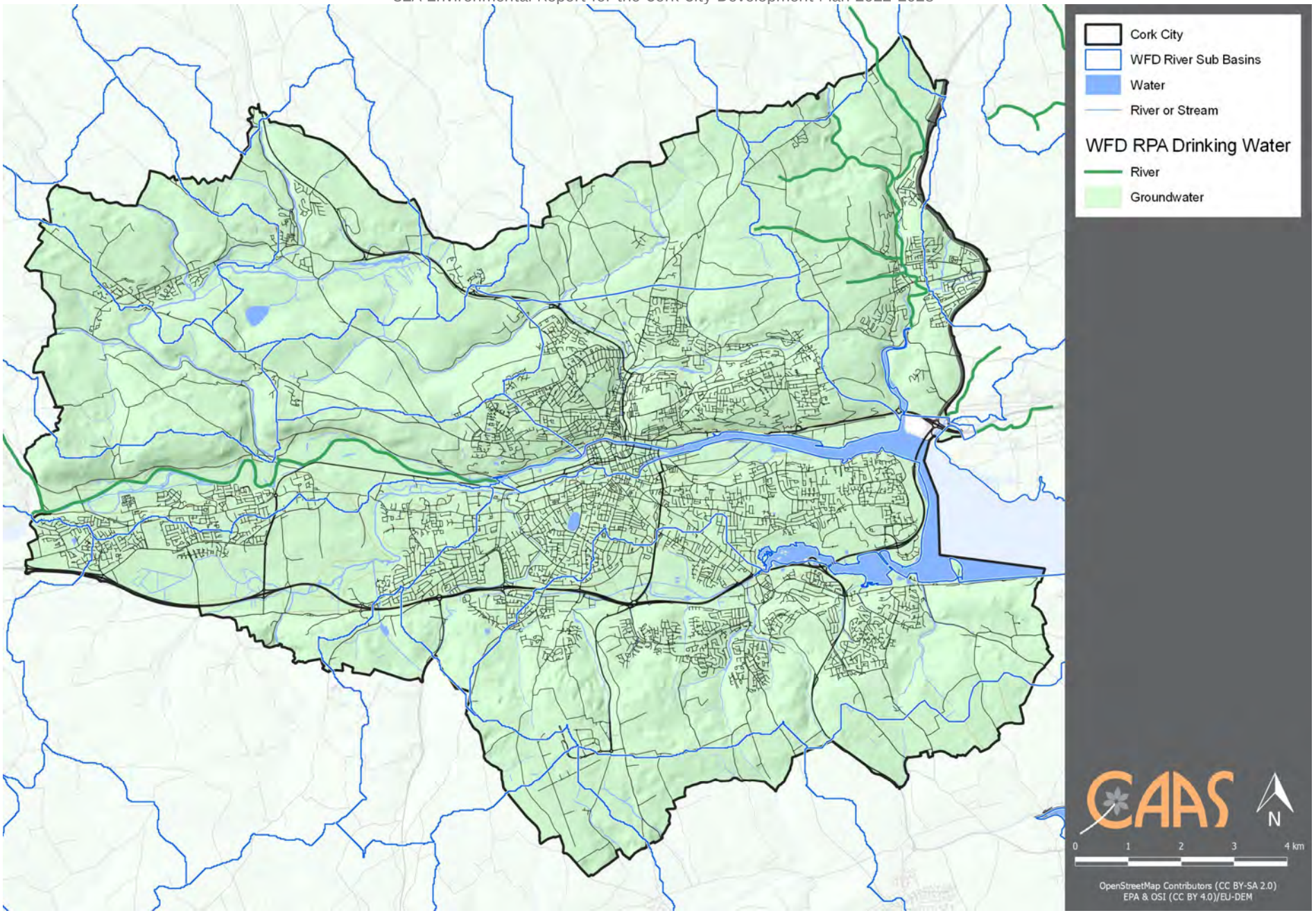

Figure 4.15 WFD Register of Protected Areas: Drinking Water

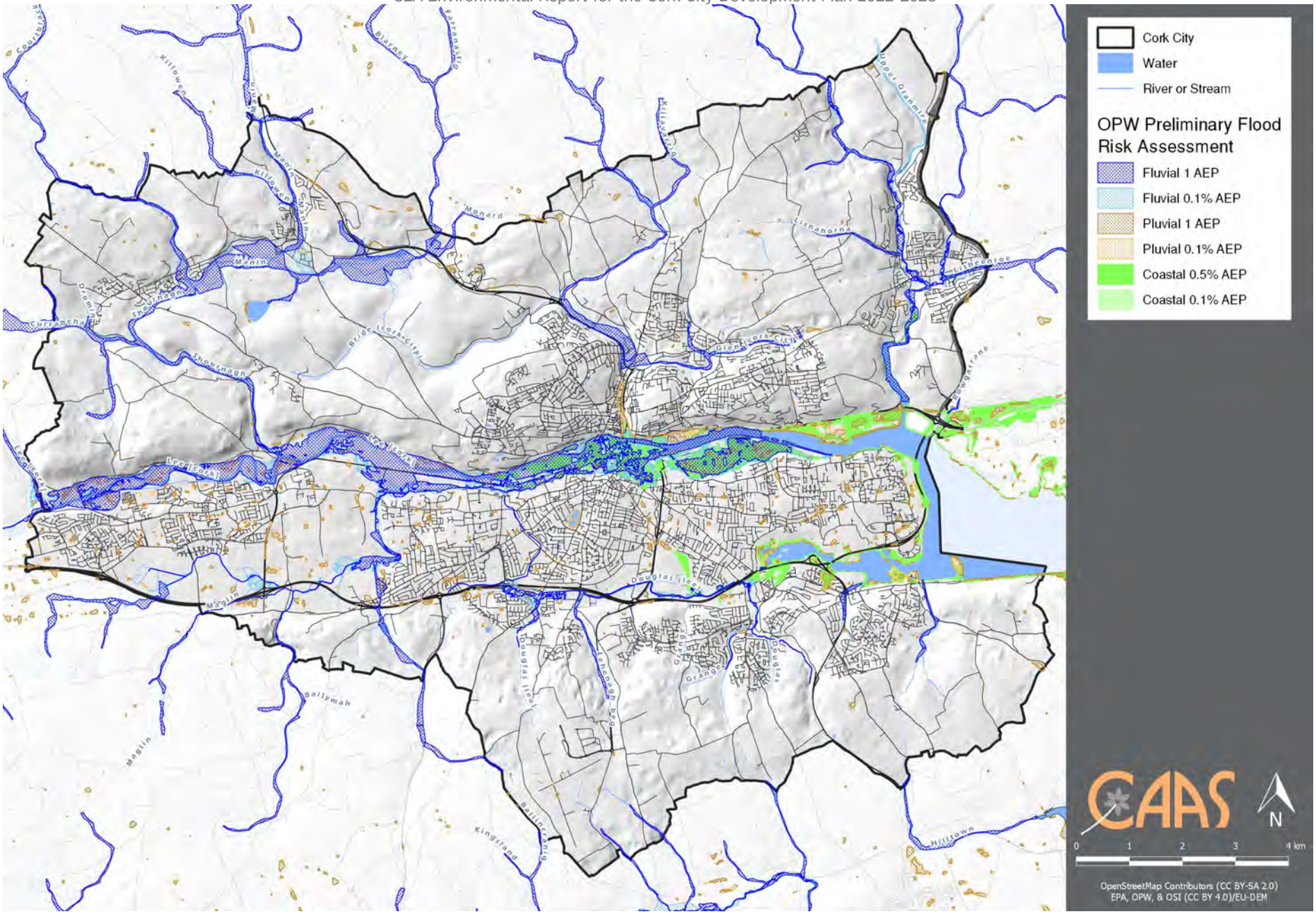

Figure 4.16 OPW Preliminary Flood Risk Assessment (PFRA) Mapping

4.10 Air and Climatic Factors

4.10.1 Introduction

Total emissions of greenhouse gases by humans come from various sectors including transport, agriculture, energy industries, manufacturing combustion, industrial processes, residential developments, commercial services developments, waste management processes and fluorinated gases equipment (such as refrigeration and fire protection systems).

Ireland's Provisional Greenhouse Gas Emissions 1990-2017 (EPA, 2018) details provisional estimates of greenhouse gas emissions for the period 1990-2017. For 2017, total national greenhouse gas emissions are estimated to be 60.75 million tonnes carbon dioxide equivalent (Mt CO_2eq). This is 0.9% lower (0.53 Mt CO_2eq) than emissions in 2016.

The report on *Ireland's Final Greenhouse Gas Emissions* 1990-2017 (EPA, 2019) identifies that:

- For 2017, the total national GHG emissions are estimated to be 60.74 million tonnes carbon dioxide equivalent (Mt CO_2eq), 0.9% lower than 2016.
- In the last 3 years, national total emissions have increased by 6.4%. In the same period, emissions in the ETS[47] sector have increased by 5.9%.
- Agriculture emissions increased by 2.9% in 2017 (driven by higher dairy cow numbers and increases in milk production).
- GHG emissions from the Transport sector decreased by 2.4% in 2017. This is the first year of decreased emissions after four successive years of increases in transport emissions.
- Agriculture and Transport accounted for 73.5% of total ESD emissions in 2017.
- Emissions in the Energy Industries sector show a decrease of 6.9% which is attributable to a 5.9% decrease in fossil fuel consumption and an increase of 21.1% and 1.6% in electricity generated from wind and hydro, respectively, in 2017. Renewables now account for 30.1% of electricity generated in 2017, an increase of 3.3% from 2016 figures. Ireland continued to be a net exporter of electricity in 2017. However, exported electricity saw a 4.7% reduction in 2017 to previous 2016 figures.
- Emissions from the Manufacturing Combustion[48] sector increased by 3.1% in 2017.
- The Industrial Processes sector emissions increased by 4.1%, mainly from increased cement production. Cement process emissions increased by 2.6% in 2017.
- GHG emissions from the Residential sector decreased by 5.0%. This can be attributed to a milder winter.
- Emissions from the Waste sector decreased by 2.5% in 2017.

The EPA 2019 publication *Ireland's Greenhouse Gas Emission Projections 2018-2040* provides an assessment of Ireland's total projected greenhouse gas emissions out to 2040 which includes an assessment of progress towards achieving its emission reduction targets out to 2020 and 2030 set under the EU Effort Sharing Decision and Effort Sharing Regulation (Regulation (EU) 2018/842). Ireland's 2020 target is to achieve a 20% reduction of non-Emission Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport, the built environment, waste and non-energy intensive industry) on 2005 levels with annual limits set for each year over the period 2013-2020. Ireland's 2030 target under the Effort Sharing Regulation is a 30% reduction of emissions compared to 2005 levels by 2030. There will be binding annual limits over the 2021-2030 period to meet that target. Key insights identified as part of the report's package of documents are that:

- There is a long-term projected decrease in greenhouse gas emissions as a result of inclusion of new climate mitigation policies and measures that formed part of the 2018-2027 National Development Plan (updated in 2021). This is evident in the With Additional Measures scenario which assumes full implementation of the programmes, policies and measures included in the 2018 National Development Plan.
- Fossil fuels such as coal, peat and gas continue to be key contributors to emissions from the power generation sector. However, a significant reduction in emissions over the longer term is projected as a result of the expansion of renewables (e.g. wind), assumed to reach 41-54% by 2030, with a move away from coal and peat.
- A growth in emissions from the transport sector continues to be projected which is largely attributed to fuel consumption from diesel cars and diesel freight. A decrease in emissions over the longer term, most notably in the With Additional Measures scenario, is largely attributed to assumed accelerated deployment of

[47] The EU emissions trading system (EU ETS) was launched in 2005 as the world's first international company-level 'cap-and trade' system for reducing emissions of greenhouse gases cost-effectively. The cap makes sure that CO_2 becomes a product and, thus, CO_2 is valued at a price, which is determined by the supply and demand at the (trading) market.

[48] Manufacturing Combustion; includes combustion of fuels in Industry and Construction, both in ETS and non-ETS

500,000 electric vehicles and the impact of greater biofuel uptake.
Agriculture emissions are projected to continue to grow steadily over the period which is mainly a result of an increase in animal numbers particularly for the dairy herd.

- The implementation of additional energy efficiency measures included in the 2018 National Development Plan will see a significant reduction in emissions in the residential, commercial/public services and manufacturing sectors over the projected period.

4.10.2 Climate Action

The National Climate Action Plan 2021 is an all of Government plan to tackle climate change and bring about a step change in Ireland's climate ambition over the coming years. The Action Plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources. The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Action Plan deals with both mitigation and adaptation.

Climate mitigation describes action to reduce the likelihood of climate change occurring or reduce the impact if it does occur. This can include reducing the causes of climate change (e.g. emissions of greenhouse gases) as well as reducing future risks associated with climate change.

The use of alternative fuels, including electricity, forms a significant part of government policy to reduce emissions, including from transport. Greater use of alternative fuels, including renewable energy, has the potential to further contribute towards energy security.

The 2019 emission projections do not consider the impact of new policies and measures that are included in the Action Plan. It is anticipated that future emission projections will include the additional impact of the Government Climate Plan.

The Climate Change Advisory Council's Annual Review 2020 identifies that the most recent projections demonstrate that, under different assumptions, Ireland will not meet its emissions reduction targets, even with the additional policies and measures included in the National Development Plan. The projections also show that progress on reducing emissions is sensitive to the future path of fuel prices. A significant and sustained rate of emissions reduction of approximately -2.5% per year is required to meet agreed objectives for 2050. However, it must be noted that additional measures within the recent Climate Action Plan are not included in the analysis to date.

Climate adaptation is a change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts.

The National Adaptation Framework Department of Communications, Climate Action and Environment, 2018), sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework, a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

The Cork City Council Climate Change Adaptation Strategy 2019-2024 features a range of actions across a number of themes, including: local adaptation governance and business operations; infrastructure and built environment; land use and development; drainage, water and flood management; nature, natural resources and cultural infrastructure; citizen safety, health and wellbeing; and partnerships with other sectors and agencies. The main goals of this strategy are:

- To make Cork City as climate-resilient as possible, reducing the impacts of current and future climate change-related conditions and events; and
- To pro-actively engage with all citizens on the subject of climate action, such as climate change, climate change adaptation and climate change mitigation.

4.10.3 Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity

generation and industry and, in sufficient amounts, could affect the well-being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

The principles to this European approach are set out in the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) (which replaces the earlier Air Quality Framework Directive 1996 and the first, second and third *Daughter Directives*; the fourth *Daughter Directive* will be included in CAFE at a later stage).

In order to comply with the directives mentioned above, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002).

The EPA's (2020) *Air Quality in Ireland 2019* identifies that:

- Air quality in Ireland is generally good however there are localised issues;
- Nitrogen dioxide (NO_2) from transport emissions is polluting urban areas; and
- Ireland was above World Health Organization air quality guideline value levels at 33 monitoring sites – mostly due to the burning of solid fuel within settlements across the country.

Problem pollutants identified by the EPA include particulate matter from burning of solid fuel and nitrogen dioxide from transport emissions in urban areas. Indications that Ireland will exceed EU limit values for nitrogen dioxide in the near future.

With regards to solutions, the report identifies that:

- To tackle the problem of particulate matter, clean ways of heating homes and improve energy efficiency of homes can be progressed; and
- To reduce the impact of nitrogen dioxide, transport options in the Government's Climate Action Plan can be implemented and transport choices can be considered by individuals.

In order to apply with European Directives relating to air quality, the EPA manages the National Ambient Air Quality Network and measures the levels of a number of atmospheric pollutants at locations across the country. The current[49] air quality within the City is identified by the EPA as being *good*.

[49] 27/04/2021 (http://www.epa.ie/air/quality/)

4.10.4 Noise

Cork City Council and Cork County Council have prepared a Noise Action Plan 2018-2023 in accordance with the requirements of the Environmental Noise Regulations 2006. The purpose of the Noise Action Plan is to avoid, prevent and reduce, on a prioritised basis the harmful effects, including annoyance due to the long-term exposure to environmental noise.

4.10.5 Existing Problems

Legislative objectives governing air and climatic factors in Cork City were not identified as being conflicted with.

4.11 Material Assets

Other material assets, in addition to those detailed below, covered by the SEA include archaeological and architectural heritage (see Section 4.12) natural resources of economic value, such as water and air (see Sections 4.9 and 4.10).

4.11.1 Public Assets and Infrastructure

Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include; settlements; resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, wastewater infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

4.11.2 Green Infrastructure

Parks and open space promote health and well-being, provide recreational facilities and range of habitats for various species. Green infrastructure is also a crucial component in building resilient communities capable of adapting to the consequences of climate change with trees, woodlands and wetlands providing carbon capture and slowing water flows while improving air quality.

4.11.3 Land

The Plan seeks to assist with the reuse and regeneration of brownfield sites thereby contributing towards sustainable mobility and reducing the need to develop greenfield lands and associated potential adverse environmental effects. Brownfield lands are generally located within urban/suburban areas.

4.11.4 Forestry

Forestry and urban woodland across the City is indicated on Figure 4.3. Urban woodlands provide recreational opportunities in addition to their heritage and economic benefits. They are a valuable resource in terms of biodiversity, recreation and tourism, and also important as links in the City's green infrastructure network.

4.11.5 Peatlands

Peatlands provide a valuable natural and archaeological resource. Peatlands are also important controllers of water levels in river catchments, providing a source of water in dry conditions and soaking up excess water during wetter periods; they actively capture and hold carbon and are an important natural resource in combatting climate change. Cutaway bogs have the potential to facilitate land uses such as employment, renewable energy generation, waste management, industrial, and tourism and recreation. Peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues. Blarney Bog in the north of the City is subject to ecological designations (see Section 4.6).

4.11.6 Coastline

Management of the coastline and coastal erosion to the east of Cork City are topics with relevance to various environmental components. The coastline is amongst the most sensitive and valuable resources, in terms of natural and cultural heritage, scenic beauty and recreation. The coast is also an important economic resource - particularly for the fishing, aquaculture, leisure and tourism industries.

The Port of Cork is a port of national significance and a significant driver of economic development in the Cork region. The Port of Cork is considered a 'Tier 1' Port by the Southern Regional Assembly RSES.

4.11.7 Renewable Energy Potential

Under EU Directive 2001/77/EC Renewable Energy, renewable energy sources are defined as renewable non-fossil energy sources such as, but not limited to wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas, bio-gases and bio-char (i.e. the thermal treatment of natural organic materials in an oxygen-limited environment).

4.11.8 Minerals and Aggregates

Minerals such as iron and copper and aggregates such as sand and gravel can occur throughout the country. Minerals and aggregates are essential to manufacturing and construction.

Minerals localities within Cork City are shown on Figure 4.17. The GSI have a suite of data sources available that would be useful in planning and assessing individual projects with regard to the environmental topic(s) of soil and/or material assets. These include:

- Aggregate Potential Mapping;
- Bedrock mapping;
- GeoUrban Bedrock;
- Quaternary and Physiographic mapping;
- 3D Quaternary Models;
- National Aquifer and Recharge mapping; and
- Geochemistry and Geophysical datasets.

4.11.9 Transport

Transport infrastructure in the City has the potential to support reductions in energy demand from the transport sector, including through electrification of modes.

The Port of Cork, located to the east of Cork City is a port of national significance and a significant driver of economic development in the Cork region. Cork International Airport is located in the south of Cork City and is the second largest airport in Ireland.

The City is well served by public transport and road links. The M8 motorway a network of national routes (N8/N20/N22/N27/N40) traverse the City. Irish Rail operate services via the Dublin/Cork and Waterford/Clonmel/ Limerick Junction rail lines. There are also a

number of public and private bus operators and linkages.

The Cork Metropolitan Area Transport Strategy (CMATS) 2040 has been developed by the National Transport Authority in collaboration with Transport Infrastructure Ireland, Cork City Council and Cork County Council with the aim of supporting an efficient transport network for the Cork Metropolitan Area. The CMATS seeks to actively promote and support improvements to the transport networks which will encourage greater use of sustainable transport, reduce car dependency and support new development in locations where sustainable travel choices can be encouraged and facilitated through existing and upgraded infrastructure and other measures. The Strategy envisages a €3.5 billion investment in transport infrastructure and mobility in Cork and aims to prioritise sustainable transport, reduce car dependency, and to provide a high level of public transport connectivity including a new Light Rail System (LRT) from Ballincollig to Mahon, via the City Centre and Docklands. Planned investments under CMATS include a high frequency bus service (BusConnects), the development of a light rail network, the expansion of commuter rail and investment in local route improvements including new orbital routes. The CMATS incorporates other transport strategy plans such as the Cork Walking Strategy 2013-2018 and the Cork Metropolitan Cycle Network Plan 2017.

4.11.10 Water Services

4.11.10.1 Wastewater

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 also responsible for the treatment and disposal of the sludge that is generated from both its water and wastewater treatment plants. The Council is an agent of Irish Water for operations and remains the designated Water Authority for the assessment and approval of on-site wastewater treatment systems and is responsible for surface water drainage in the City. Cork City Council currently operates water services on an agency basis for Irish Water as part of a Service Level Agreement in the pre-2019 City boundary area, while Cork County Council continues to manage water and wastewater services in the extended boundary area[50].

The provision of well-maintained quality wastewater treatment infrastructure is essential to facilitate sustainable development of the City in line with the Core Strategy while also protecting the environment and public health. Irish Water is now responsible for the collection, treatment and disposal of wastewater where public wastewater facilities exist in towns and villages. In unserviced areas and outside the main towns and villages, the main method of sewage disposal is by means of individual septic tanks and proprietary wastewater treatment systems.

The EPA's 2020 report *'Urban Wastewater Treatment in 2019'* identified that:

- Wastewater treatment at 19 towns and cities (including **Cork City**) did not meet European standards for the treatment of urban wastewater in 2018;
- Raw sewage is released into the environment from 35 urban areas;
- Wastewater from 48 areas (including **Cork City**) is the main significant pressure on waters at risk of pollution;
- Wastewater contributed to poor quality bathing waters at three beaches in 2019;
- Discharges from 13 areas must improve to protect freshwater pearl mussels;
- Irish Water must complete assessments of the impacts of wastewater discharges on 26 shellfish waters to inform the need for any improvements; and
- Seven wastewater collection systems (including Cork City) have been found non-compliant with European Union requirements.
- Cork City is listed as Priority Area, where improvements are required to resolve urgent environmental issues with respect to wastewater treatment.

Cork City Council will work alongside and facilitate the delivery of Irish Water's Water Investment Plan to support and facilitate the delivery of new or improved wastewater treatment plants in the City. Wastewater plans and projects for Cork City include proposed upgrades to the Carrigrenan WWTP (which serves much of the Plan area including City suburbs, Little Island, Glanmire and Glounthaune areas) treatment process to allow compliance with its Waste Licence and to cater for future population growth[51].

There are separate treatment plants serving the urban towns of Ballincollig, Blarney/Tower and Kileens, as well as a number of smaller

[50] Cork City Development Plan 2022 - 2028

[51] Cork City Development Plan 2022 - 2028

treatment plants serving settlements in the City's hinterland. In unserviced areas and outside the main settlements, the main method of sewage disposal is by individual septic tanks and other types of wastewater treatment.

Irish Water has provided information on wastewater treatment capacity, constraints and projects planned within the City to improve the existing network, to assist the Council in the preparation of the new City Development Plan (shown on Table 4.2). This information indicates where there may be wastewater treatment capacity available to accommodate growth ("headroom") in terms of population equivalent[52] (PE) in areas serviced by a public wastewater treatment plant. Spare treatment capacity is identified as being available in most WWTPs serving the City with the following levels of headroom (PE) available:

- Carrigrennan WWTP (122,180 PE);
- Ballinacollig WWTP (10,493 PE);
- Blarney WWTP (5,345 PE);
- Rosemount, Kilcully WWTP (6 PE); and
- Kileens WWTP (potential availability).

Table 4.3 provides information on wastewater treatment plant performance sourced from the EPA's 2019 Annual Environmental Reports (AERs). These Wastewater Agglomerations are subject to Wastewater Discharge Licences issued by The Environmental Protection Agency. WWTPs non-compliant with the Emission Limit Values (ELVs) set in the Discharge Licences include:

- Blarney WWTP (D0043-01);
- Ballincollig New WWTP (D0049-01);
- Cork City WWTP (D0033-01);
- Killeens WWTP (D0329-01);

Drainage Area Plans (DAPs) are being prepared by Irish Water for the Cork City wastewater network (which includes the network in Glanmire, Glounthaune and Little Island, all of which drain to Carrigrenan WWTP), and the Ballincollig wastewater network.

Irish Water is responsible for the treatment and disposal of the sludge that is generated from both its water and wastewater treatment plants. Irish Water has prepared a National Wastewater Sludge Management Plan 2016-2021 that outlines Irish Water's strategy to ensure a nationwide standardised approach for managing wastewater sludge over a 25-year period. A separate plan will be prepared in relation to sludge produced at drinking water plants.

4.11.10.2 Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout the City. Cork City lies within the Cork City Water Resource Zone (WRZ). The Cork City WRZ includes the Cork City Water Supply System (WSS), Cork Harbour and City WSS and Glashaboy WSS. The Cork Harbour and City WSS (Inniscarra Water Treatment Plant) supplies some of the eastern, western and southern suburbs of Cork City including the towns of Ballincollig, Blarney, and Tower, while the Glashaboy WSS serves Glanmire. The remaining households are served by either Group Water Schemes or private wells, which do not fall within the remit of Irish Water.[53]

Under Section 58 of the Environmental Protection Agency Act 1992, the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water).

The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above. the most recent available RAL (Q4 of 2020 published in January 2021) identifies two Cork City drinking water supplies:

- **The Glashaboy Water Supply** is listed on the most recent EPA RAL due to EPA treatment and management issues. This Water Supply Scheme has a supply volume of 20,010 m^3/day, serving a population of 22,808 people. The upgrade of this plant is scheduled for completion in June 2024.
- **The Cork City Water Supply** is listed on the most recent EPA RAL due to EPA treatment and management issues. This Water Supply Scheme has a supply volume of 42,733 m^3/day, serving a population of 87,114 people. The proposed plan of action to remedy this issue is to upgrade the Water Treatment Plant by December 2021.

Currently, Irish Water is developing the National Water Resource Plan outlining how to move to a sustainable, secure and reliable

[52] WWTPs are described in terms of their designed treatment capacity, which is generally expressed as population equivalent (PE). This is a measurement of total organic biodegradable load, including industrial, institutional, commercial and domestic organic load, on a wastewater treatment plant, converted to the equivalent number of PEs. One person is considered to generate 60g of five-day Biochemical Oxygen Demand (BOD) per day. 1 PE is defined as being equivalent to 60g of BOD per day.

[53] Cork City Development Plan 2022 - 2028

public drinking water supply over a 25-year period while safeguarding the environment. It will outline how Irish Water intends to maintain a balance between supply from water sources around the country and demand for drinking water over the short, medium and long term. This will facilitate future planning and ensure provision of sufficient, safe, clean drinking water to facilitate the social and economic growth of the City.

It is the policy of the Council to work in conjunction with Irish Water to protect existing water infrastructure, to maximise the potential of existing capacity and to facilitate the timely delivery of new wastewater services infrastructure to facilitate future growth. Proposed water supply works in Cork City include[54]:

- As part of the Cork City Water Networks Project: Phase 1 of the Eastern Strategic Link (ESL) trunk water main project was commissioned to enable connectivity across Cork City and County water networks providing security of water supply for the Central Island. Phase 2 is planned to complete the link from the east of the City through the City Centre and on to Shanakiel. A 5km Western Trunk Main linking the County Cork Harbour and City Trunk Main is planned near the N40 South Ring Road across to the Lee Road Water Treatment Plant which will ensure continuity of supply to the City. The recent completion of the interconnector from Glashaboy Reservoir to the City Centre will also ensure an adequate supply to serve the Docklands.
- The Lee Road Water Treatment Plant serving the City WSS, produced an average 41.6 million litres of drinking water daily in 2019. Treated water is pumped to reservoirs at Churchfield, Hollyhill and Shanakiel from where it gravitates through the distribution network to various users across the city. Water quality reports for recent years indicate that, despite an ageing infrastructure, the standard of water produced is generally of a very high quality. A major upgrade to the site commenced late in 2019 and is intended to be completed in 2022.
- Advanced site works for the Old Whitechurch Road, which is planned to facilitate around 600 new homes on a major Council owned landbank, have been recently completed. This includes the provision of water, foul water and surface water drainage services.

The preferred interim and long-term interventions required to ensure a sustainable water supply in Cork City will be identified through the National Water Resources Plan process.

4.11.10.3 Surface Water Drainage

Sustainable Urban Drainage systems (SUDS) can minimise the quantity and increase the quality of surface water runoff as well as mitigating adverse impacts of climate change. SUDS can also provide amenity and biodiversity benefits. The Council seeks to ensure the sustainable management of surface water discharges in urban areas through the use of SUDS.

4.11.11 Waste Management

Southern Waste Region comprises ten local authority areas of: Limerick; Tipperary; Wexford; Carlow; Kilkenny; Waterford; Cork City; Cork County; Kerry; and Clare.

The Southern Waste Management Plan 2015-2021 provides the framework for solid waste management in the region and sets out a range of policies and actions to meet specified mandatory and performance-based targets. It is underpinned by National and European waste legislation and the work carried out will ensure the continued management of waste in a safe and sustainable manner. The Plan includes eight Strategic Objectives and three overarching targets:

- 1% reduction per annum in the quality of household waste generated per capita over the period of the Plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

The Southern Waste Management Plan states that the future role of local authorities in waste management will be focused on education, prevention, and resource efficiency activities as well as regulating householders, businesses and waste operators and enforcing waste legislation. Waste infrastructure provided by local authorities will mainly include bring banks and civic amenities.

4.11.12 Existing Problems

There are a number of challenges with respect to the provision of water services infrastructure that are described under Section 4.11 above.

[54] Cork City Development Plan 2022 - 2028

The Water Services Section of Cork City Council will co-operate with Irish Water in providing and maintaining adequate public water supply and wastewater collection and treatment infrastructure throughout the City for the period of the plan and beyond. In conjunction with Irish Water, the Water Services Section of Cork City Council will endeavour to ensure the continued investment in and delivery of improvements to water infrastructure over the Plan period through the implementation of the Capital Investment Plan.

The provisions of the new City Development Plan will contribute towards protection of the environment with regard to impacts arising from material assets.

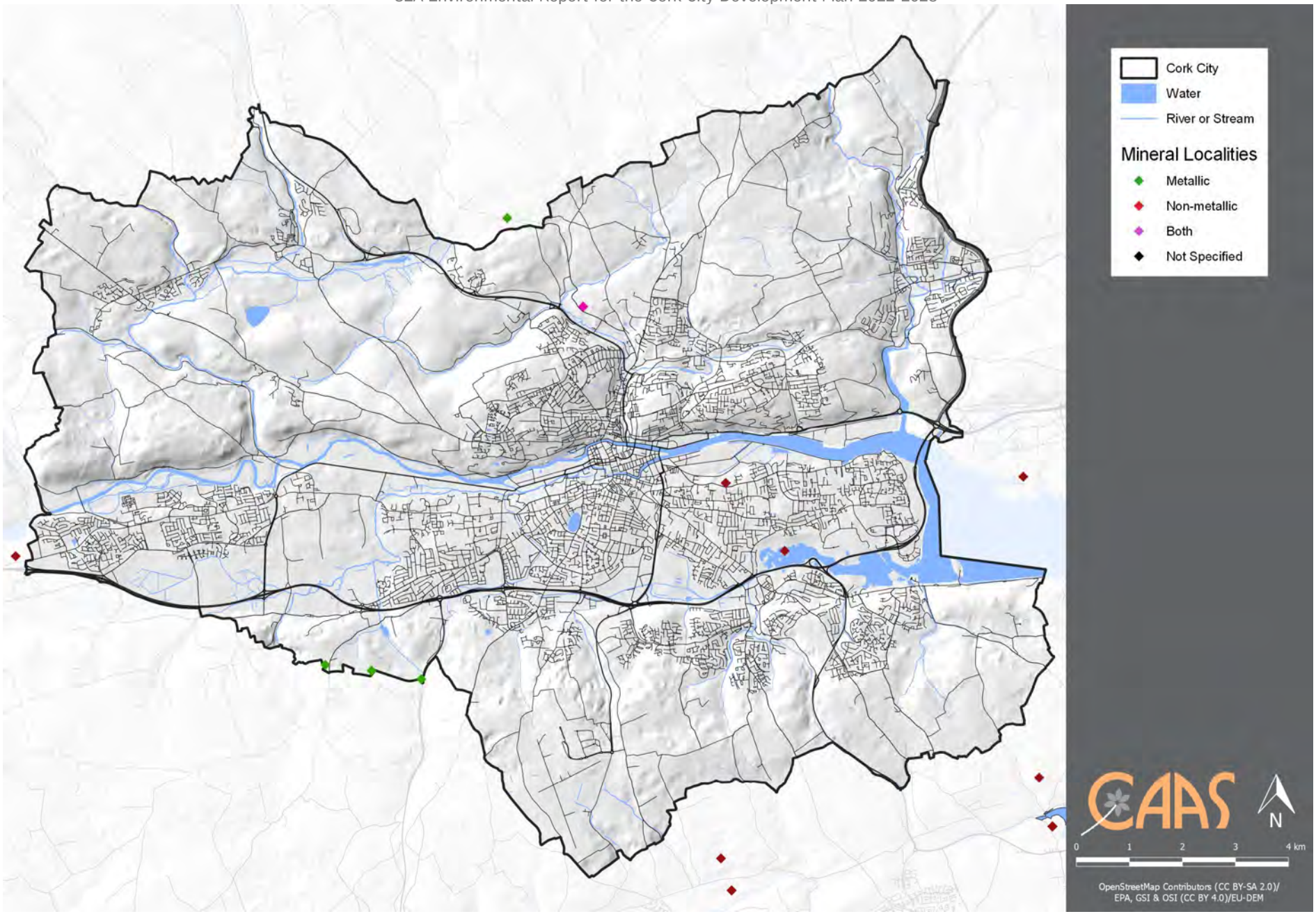

Figure 4.17 Minerals Localities

Table 4.2 Available Wastewater Capacity in Cork City (Irish Water, April 2020)

Region	Area	Settlement	Census pop. (2016)	Wastewater Treatment Plant (WWTP)	Reg #	Serves other areas?	WWTP Capacity (PE)		Load (PE) 2019	Headroom (PE)		Current project completion year
							Today	Upon works completion		WWDL ELV Capability	UWW Standards Capability (not WWDL ELVs)	
S	Cork City	**Cork City**	208,669	Carrigrennan WWTP	D0033	Yes	413,200	=	291,020	122,180		
S	Cork City	**Ballincollig**	(Cork City)	Ballincollig WWTP	D0049	No	33,000	=	22,507	10,493		
S	Cork City	**Blarney**	2,539	Blarney WWTP	D0043	Yes	13,000	=	7,655	5,345		
S	Cork City	**Kileens**	(Cork City)	Killeens WWTP	D0329	No	600	=	587	0	13	
										CoA Headroom (PE)		
S	Cork City	**Rosemount, Kilcully**	Unavailable	Rosemount, Kilcully WWTP	A0351	No	100	=	94	6		

Column headings	Description
WWTP Capacity (PE) Today	Overall design capacity of the wastewater treatment plant (WWTP) in population equivalents (PE) today (the date at the top of this table).
WWTP Capacity (PE) Upon works completion	Overall design capacity of the WWTP in population equivalents (PE) upon completion of a relevant project delivering additional capacity. Note that 'WWDL' or 'UWW' following the capacity value indicates that the upgraded WWTP will have capability to achieve the full Waste Water Discharge Licence (WWDL) emission limit values (ELVs) in the former case, or at least the Urban Waste Water (UWW) Treatment Directive parametric values in the latter case.
Load (PE) 2019	Wastewater load arising from the settlement(s) being served entering the WWTP in 2019.
Headroom (PE) WWDL Capability UWW Standards Capability (not WWDL ELVs)	Headroom available at the WWTP in 2019 in terms of population equivalents based on available capacity now or by completion of a project by **2022** (where relevant). Green = spare capacity available. Amber = potential spare capacity. WWTP currently not compliant with Waste Water Discharge Licence emission limit values but is capable of achieving at least UWW standards. Potential availability of capacity in this case would be dependent on any additional load not resulting in a significant breach of the combined approach as set out in Regulation 43 of the Waste Water Discharge (Authorisation) Regulations 2007. Red = no spare capacity available.
Current project completion year	This is the current forecasted completion year as of date of this table and is subject to change. 'Post 2024' indicates that the project is proposed to be completed within the next investment period (2025-2029), subject to the planning and approval of the next capital investment plan. Note, there is no guarantee that this capacity will be delivered if the current Investment Plan is amended due to emerging needs or changes due to exchequer funding.
General notes	**(i) The headroom figure stated is based on available information on the date of issue of this table and is subject to change.** **(ii) The indication of spare treatment capacity has been determined based on a standardised national reivew of the available information.** **(iii) A Pre-Connection Enquiry should be submitted to Irish Water to determine the feasibility of connecting any particular site to the Irish Water network, feasibility should not be inferred from this register.**

Table 4.3 Wastewater Treatment Plant Performance

Plant name and Reference	Treatment Provided	Overall Compliance (Pass/Fail)	Parameter Failed	Cause of Exceedances and Significance of Results (Water Quality)	Organic Capacities (PE)		
					As Constructed	Collected Load (peak week)	Remaining
Ballincollig New D0049-01	Tertiary	Fail	ortho-Phosphate (as P) - unspecified mg/l Total Phosphorus (as P) mg/l	Cause: Inadequate infrastructure. • The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. • The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. • The discharge from the wastewater treatment plant does not have an observable impact on the water quality. • The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.	33000	22507	10493
Cork City D0033-01	Secondary	Fail	Total Nitrogen mg/l Total Phosphorus (as P) mg/l	Cause: No N and P removal treatment step • The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. • The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. • The discharge from the wastewater treatment plant does not have an observable impact on the water quality. • The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.	413200	274780	138420
Blarney D0043-01	Tertiary	Fail	ortho-Phosphate (as P) - unspecified mg/l Total Phosphorus (as P) mg/l	Cause: Influent flows were lowest during the months where this exceedance occurred, and chemical dosing was not adjusted sufficiently. • The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. • The ambient monitoring results meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. • The discharge from the wastewater treatment plant does not have an observable impact on the water quality. • The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.	13000	7655	5345
Kileens D0329-01	Tertiary	Fail	Ammonia-Total (as N) mg/l Ammonia-Total (as N) mg/l BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l ortho-Phosphate (as P) - unspecified mg/l Suspended Solids mg/l	Cause: Old RBC media replaced; process optimisation ongoing. • The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence. • The ambient monitoring results does not meet the required EQS. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. • Based on ambient monitoring results a deterioration in Ammonia (N) mg/l , concentrations downstream of the effluent discharge is noted. • The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.	1200	610	590

4.12 Cultural Heritage

4.12.1 Archaeological Heritage

Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. Archaeological sites and monuments vary greatly in form and date; examples include earthworks of different types and periods, (e.g. early historic ringforts and prehistoric burial mounds), megalithic tombs from the Prehistoric period, medieval buildings, urban archaeological deposits and underwater features.

Cork City is one of the oldest cities in Ireland and has a rich and significant archaeological heritage, ranging from seventh century monasteries to 11th century Viking settlements and 12th century Anglo-Norman stone walls. The medieval street pattern of Cork City is still evident today as is its historic trading centre maritime merchant ports.

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts.

The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped. It is available from the National Monuments Service and at archaeology.ie.

The term 'monument' includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. All monuments in existence before 1700 A.D. are automatically considered to be historic monuments within the meaning of the Acts. Monuments of architectural and historical interest also come within the scope of the Acts. Monuments include: any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections; any cave, stone or other natural product, whether or not forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position; any, or any part of any, prehistoric or ancient tomb, grave or burial deposit, or, ritual, industrial or habitation site; and any place comprising the remains or traces of any such building, structure or erection, any such cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site, situated on land or in the territorial waters of the State', but excludes 'any building or part of any building, that is habitually used for ecclesiastical purposes' (National Monuments Acts 1930-2004).

A recorded monument is a monument included in the list and marked on the map, which comprises the RMP set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Notification within which requirements for notifications of proposed works apply.

A Sites and Monuments Record (SMR)[55] is a manual containing a numbered list of all certain and possible monuments accompanied. An Urban Archaeology Survey was completed in 1995 and contained reports on historic towns dating to before 1700 A.D. with a view to delineating zones of archaeological potential (SMR Zones of Notification). The SMR formed the basis for issuing the RMP.

Figure 4.18 shows the spatial distribution of Recorded Monuments and their associated Zones of Notification within and surrounding the City. There are 60 archaeological sites within Cork City Centre including standing stones and medieval walls and c. 400 entries to the RMP within the surrounding towns, villages and hinterland. Churches, houses, distilleries, factories and graveyards are amongst the most common recorded monuments and sites of significant archaeological, historic and cultural importance include St. Anne's Church, St. Fin Barre's Cathedral, Blarney Castle Estate and Elizabeth Fort.

Clusters of archaeological heritage are concentrated around the City's historic core and

[55] The RMP was issued for each county between 1995 and 1998 in a similar format to the existing SMR. However, the RMP differs from the earlier lists in that, as defined in the Act, only monuments with known locations or places where there are believed to be monuments are included. The large archive and supporting database are managed by the National Monuments Service and the records are continually updated and supplemented as additional monuments are discovered. (https://data.gov.ie/dataset/national-monuments-service-archaeological-survey-of-ireland).

within the centres of other settlements in the Plan area. The City's historic core consists of the Medieval City and Georgian City with many sites of significant archaeological interest. Cork City Centre is also designated a Zone of Archaeological Potential.

Cork's unique industrial heritage include: a range of mill complexes including those in the riverside villages of Douglas and Glanmire; the gunpowder mills in Ballincollig, with its range of surviving buildings and canal system; and examples of industrial -maritime heritage , such as Butter Market in Shandon and the Bonded Warehouses in the Port of Cork. There are two Sites of National Importance in the ownership of Cork City Council (mapped on Figure 4.18), Elizabeth Fort and Ballincollig Gunpowder Mills.

The Underwater Archaeology Unit was established within the National Monuments Service to manage and protect Ireland's underwater cultural heritage, including the quantification of the underwater resource and assessing development impacts in order to manage and protect this aspect of Ireland's heritage. The Shipwreck Inventory is principally a desktop survey with information gathered from a broad range of cartographic, archaeological and historical sources, both documentary and pictorial. Wrecks over 100 years old and archaeological objects found underwater are protected under the National Monuments (Amendment) Acts 1987 and 1994. Significant wrecks less than 100 years old can be designated by Underwater Heritage Order on account of their historical, archaeological or artistic importance. Such Orders can also be used to designate areas of seabed or land covered by water to more clearly define and protect wreck sites and archaeological objects. Under the legislation all diving on known protected wreck sites or with the intention of searching for underwater cultural heritage is subject to licensing requirements.

Rivers, estuaries and marine and coastal areas within and adjacent to Cork City may contain many features and finds associated with riverine heritage such as shipwrecks, piers, quay walls, fords, stepping stones and associated archaeological objects and features.

4.12.2 Architectural Heritage

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all: structures and buildings together with their settings and attendant grounds, fixtures and fittings; groups of structures and buildings; and, sites which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest.

Records of Protected Structures are legislated for under Section 12 and Section 51 of the Planning and Development Act 2000 as amended. Protected structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view.

Examples of Protected Structures in the Plan area include churches, markets, gaols, post boxes and building fronts. Clusters of architectural heritage can be found in Cork City Centre and in settlements such as Blarney, Ballincollig and Glanmire. Architectural heritage within Cork City is shown on Figure 4.19.

In relation to a protected structure or proposed protected structure, the following are encompassed:

- The interior of the structure;
- The land lying within the curtilage[56] of the structure;
- Any other structures lying within that curtilage and their interiors; and
- All fixtures and features that form part of the interior or exterior of any structure or structures referred to in subparagraph (i) or (iii).

Cork City has an important vernacular heritage with many important historic buildings and structures. Historic Street Character Areas are designated within Cork City and consist of groups of buildings with architectural and social interest, including a number of older residential areas outside the City Centre. Individual buildings of character are also identified, including farmhouses, cottages, stone walls and

[56] Curtilage is normally taken to be the parcel of ground immediately associated with the Protected Structure, or in use for the purposes of the structure. Protection extends to the buildings and land lying within the curtilage. While the curtilage sometimes coincides with the present property boundary, it can originally have included lands, features or even buildings now in separate ownership, e.g. the lodge of a former country house, or the garden features located in land subsequently sold off. Such lands are described as being attendant grounds, and the protection extends to them just as if they were still within the curtilage of the Protected Structure.

other local features that contribute to the architectural heritage of the area.

In addition to Protected Structures, the Planning and Development Act, 2000 provides the legislative basis for the protection of Architectural Conservation Areas (ACAs). An ACA is a place, area or group of structures or townscape that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan. The ACA designation requires that planning permission must be obtained before significant works can be carried out to the exterior of a structure in the ACA that might alter the character of the structure or the ACA. There are many existing ACAs designated within the City – these are mapped on Figure 4.19 and listed below:

- Albert Quay
- Albert Road
- Ballinlough Road (Annville/Ardeevin group)
- Bandon Road 38-43 and Lough Road 58-60
- Barrett's Buildings, off Blarney Street
- Bethesda Row, Old Blackrock Road
- Bishopstown Park
- Blackpool
- Blackrock Road
- Blarney
- Castleview Terrace 1-11, Lower Glanmire Road
- Coburg Street and Saint Patrick's Hill
- Corporation Buildings, Saint Paul's Avenue
- Douglas Road-Northwest
- Douglas-Donnybrook
- Former Ford Factory (Marina Commercial Park)
- Friar Street
- Grattan Hill, Lincoln Place, Hackett's Terrace and Mahony's Avenue
- Greenmount
- Lower Glanmire Road
- The Mardyke
- MacCurtain Street
- Marie Place 1-12, Windmill Road
- Melbourn Road Estates
- Myrtle Hill Terrace
- North Main Street
- North Mall/The Marsh
- Oliver Plunkett Street
- Paul Street
- Railway Cottages 1-13, Anglesea Street
- Rockboro Road 18-20
- Shandon
- South Channel
- South Parish
- Sunday's Well
- Turner's Cross
- University College Cork/College Road/Magazine Road
- Vandeville 1-4, Ballinlough Road
- Victoria Road
- Walsh's Square, Devonshire Street West
- Wellington Road/Saint Luke's

The National Inventory of Architectural Heritage (NIAH) is a State initiative under the administration of the Department of Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media and was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister of Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media to the local authorities for the inclusion of particular structures in their Record of Protected Structures. The NIAH includes historic gardens and designed landscapes. Figure 4.19 shows entries to NIAH within the City and surrounding areas.

4.12.3 Existing Problems

The context of archaeological and architectural heritage has changed over time within the City, however no existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

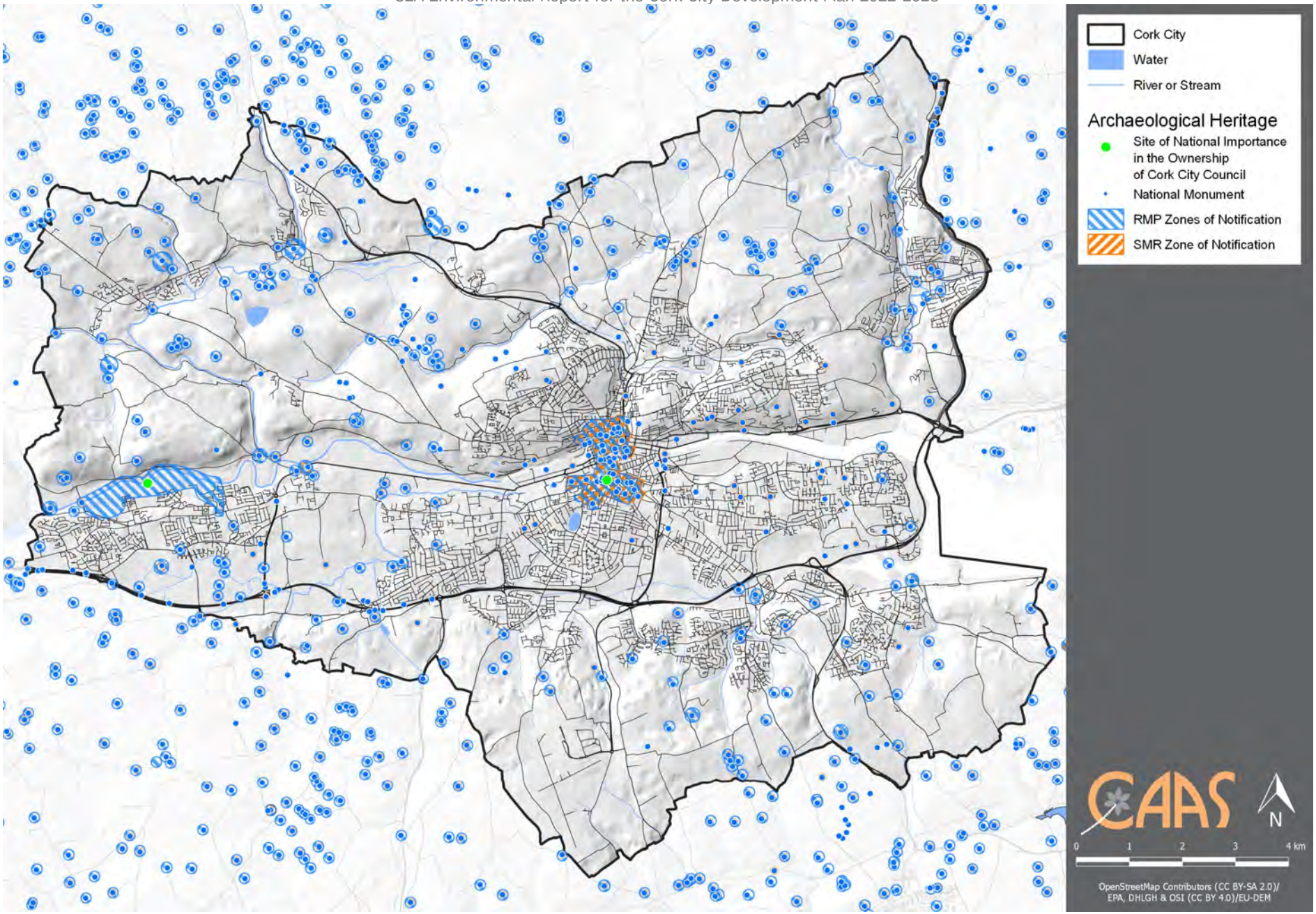

Figure 4.18 Archaeological Heritage

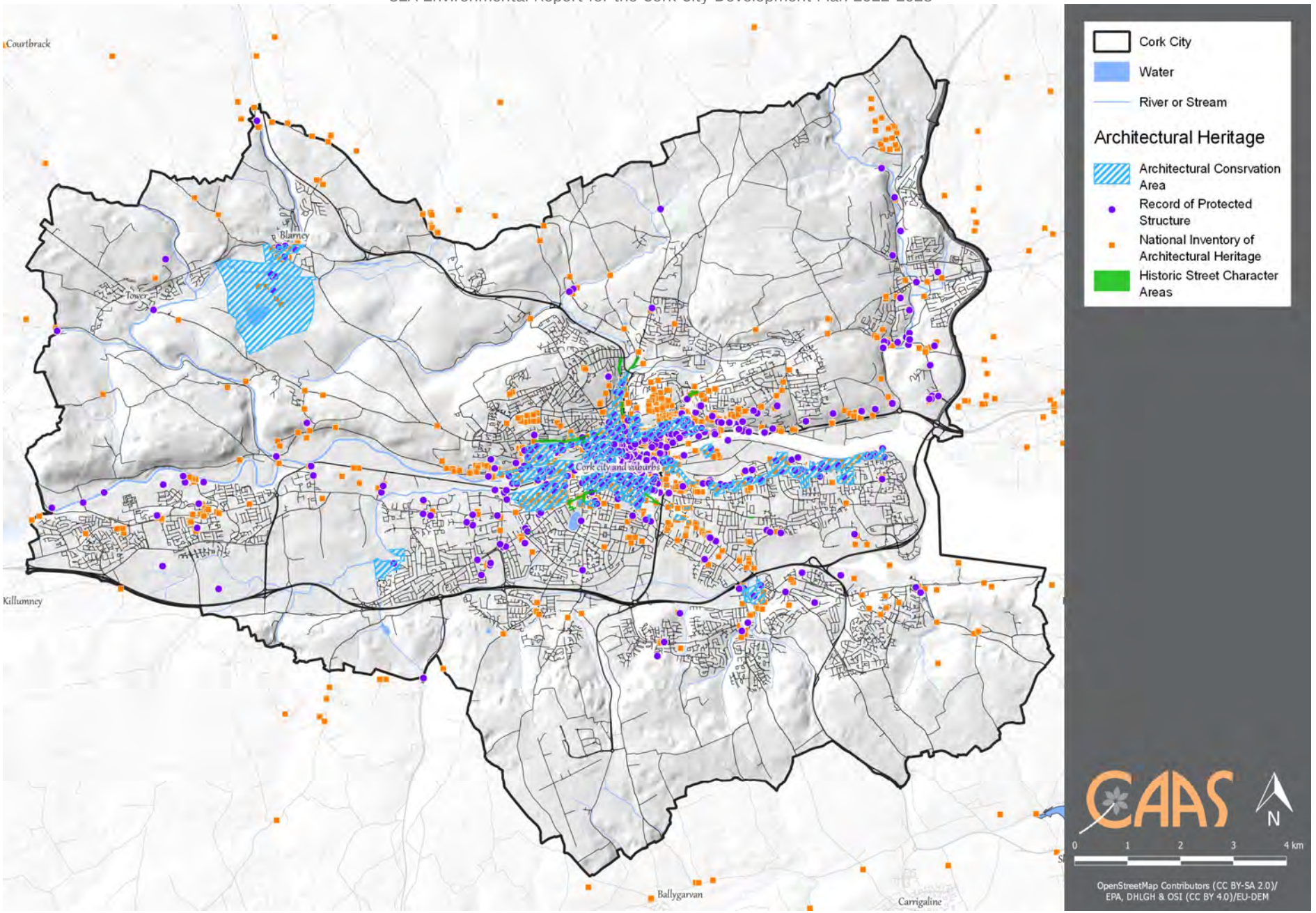

Figure 4.19 Architectural Heritage

4.13 Landscape

4.13.1 Introduction

Article 1 (a) of the European Landscape Convention provides a definition of landscape as follows; "Landscape means an area, as perceived by people whose character is the result of the action and interaction of natural/or human factors". The importance of landscape and visual amenity and the role of its protection are recognised in the Planning and Development Act 2000 as amended, which requires that Development Plans include objectives for the preservation of the landscape, views and the amenities of places and features of natural beauty.

The visual character of Cork City is due to its variety of landscapes and rich and diverse built and cultural heritage. Built around estuarine islands in the valley of the River Lee, Cork City is shaped by its rolling landscape, waterways and a rich mix of natural, built and cultural heritage. The Lee Valley runs through the centre of the City giving rise to steep hills to the north and to the south. The Lee Estuary flows into Cork Harbour to the east of the City.

4.13.2 Landscape Character Assessment

The European Landscape Convention was ratified in Ireland in 2002, this required EU Member States to adopt national measures to promote landscape, planning, protection and management.

The purpose of landscape character assessment is to provide the foundation for policy formulation and decision making for landscape management.

The Cork City Council Landscape Study (2008)[57] identified seven Landscape Character Areas, within the City, shown on Figure 4.20 and listed below:

- Estuarine/Riverine;
- Natural harbour;
- Historic urban core;
- Inner-city residential;
- Sub-urban residential;
- Urban sylvan character; and
- Urban industrial/commercial/Institutional.

4.13.3 Areas of High Landscape Value and Landscape Preservation Zones

Cork City Council seeks to protect and enhance the landscape character of the City by protecting the significant landscape elements that contribute to the general amenity of Cork City.

Areas of High Landscape Value and Landscape Preservation Zones (shown on Figure 4.21) are identified in the Plan and must be considered when assessing planning applications.

Areas of High Landscape Value display an intrinsic landscape character and a special amenity value. Landscape Preservation Zones are areas in need of special protection as their character and amenity value is considered to be to highly sensitive to development.

4.13.4 Other Landscape Designations[58]

Panoramic viewing locations are accessible to the public and facilitate views of Strategic Landmark Buildings/Strategic Cityscapes and Strategic Landscapes.

Strategic and local landmark buildings have been identified so that linear views of these buildings can be protected through the management of development. Strategic landmark buildings are those that are widely appreciated due to their visual prominence and the role that they play in helping people to orientate themselves within the City. Local landmark buildings are important within the City's neighbourhoods due to their local visual prominence.

Rivers corridors provide expansive views of the City and rural areas, and include views from quays, bridges and riverbanks.

[57] This Study referred to the pre-2019 City area, and Cork City Council will undertake a revised landscape study that addresses the entirety of the administrative area including the urban towns, villages and suburbs.

[58] Cork City Development Plan 2022-2028

Scenic routes of amenity value identified within the hinterland area benefit from protection with the aim of ensuring that the natural beauty of these routes is maintained. The objective of the designation is to manage development along these routes in order to ensure that distinctive landscape value and quality is maintained.

4.13.5 Cork County Council Landscape Designations

The County Cork Landscape Character and Sensitivity Assessment (2003) identifies five Landscape Character Types within Cork City (shown on Figure 4.22) as follow:

- 1 – City Harbour and Estuary;
- 3 – Indented Estuarine Coast;
- 6a – Broad Fertile Lowland Valleys;
- 8 – Hilly River and Reservoir Valleys; and
- 10b – Fissured Fertile Middleground.

Landscape types are evaluated in terms of Landscape Value, Landscape Sensitivity and Landscape Importance. The County Cork Landscape Character and Sensitivity Assessment also identified Scenic Routes and High Value Landscape within Cork City. High Value Landscapes identified within Cork City include: City Harbour and Estuary; Indented Estuarine Coast; and Hilly River and Reservoir Valleys. Scenic Routes and High Value Landscape are also shown on Figure 4.22.

4.13.6 Existing Environmental Problems

New developments have resulted in changes to the visual appearance of lands within the City however legislative objectives governing landscape and visual appearance were not identified as being conflicted with.

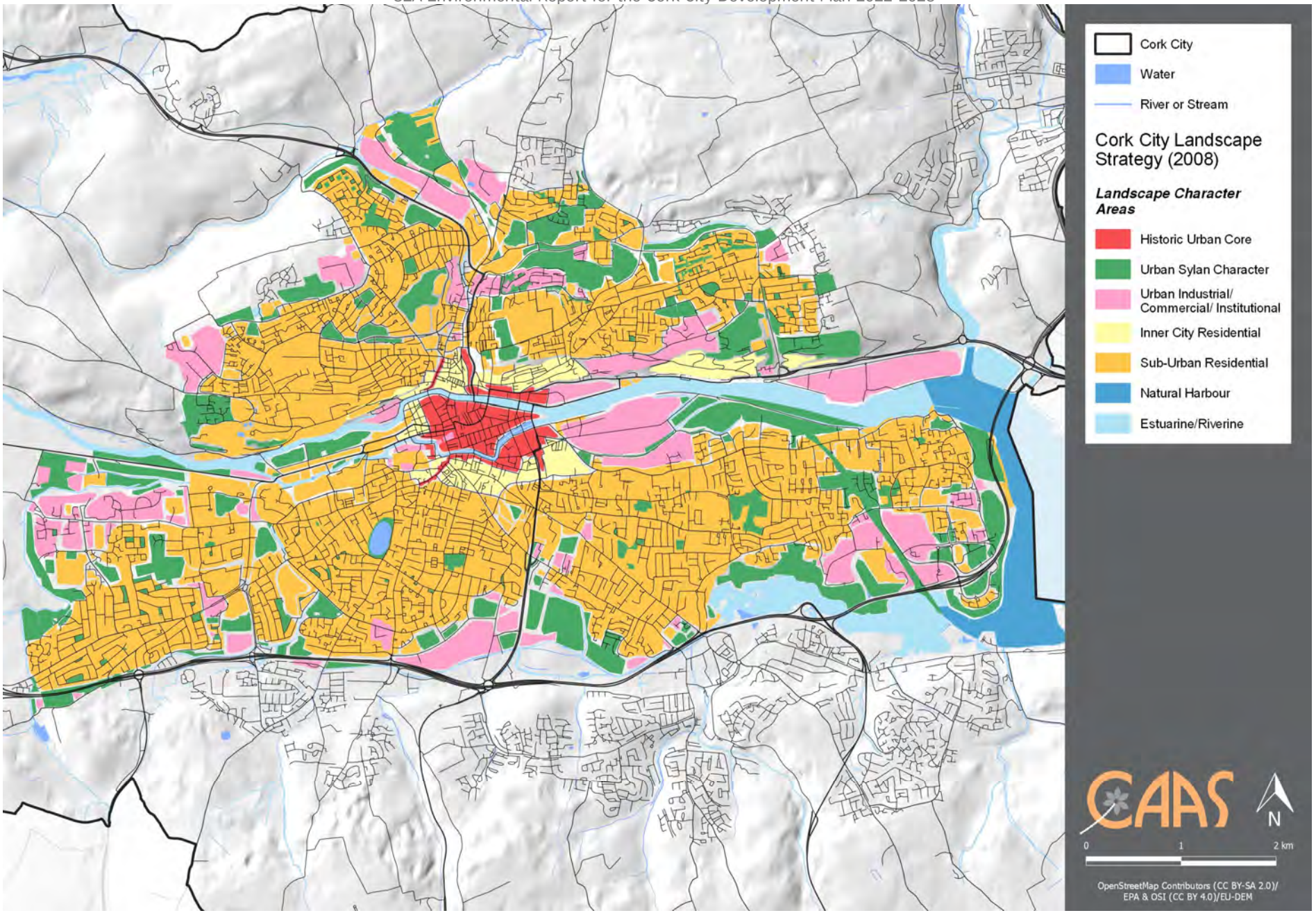

Figure 4.20 Cork City Council Landscape Character Areas

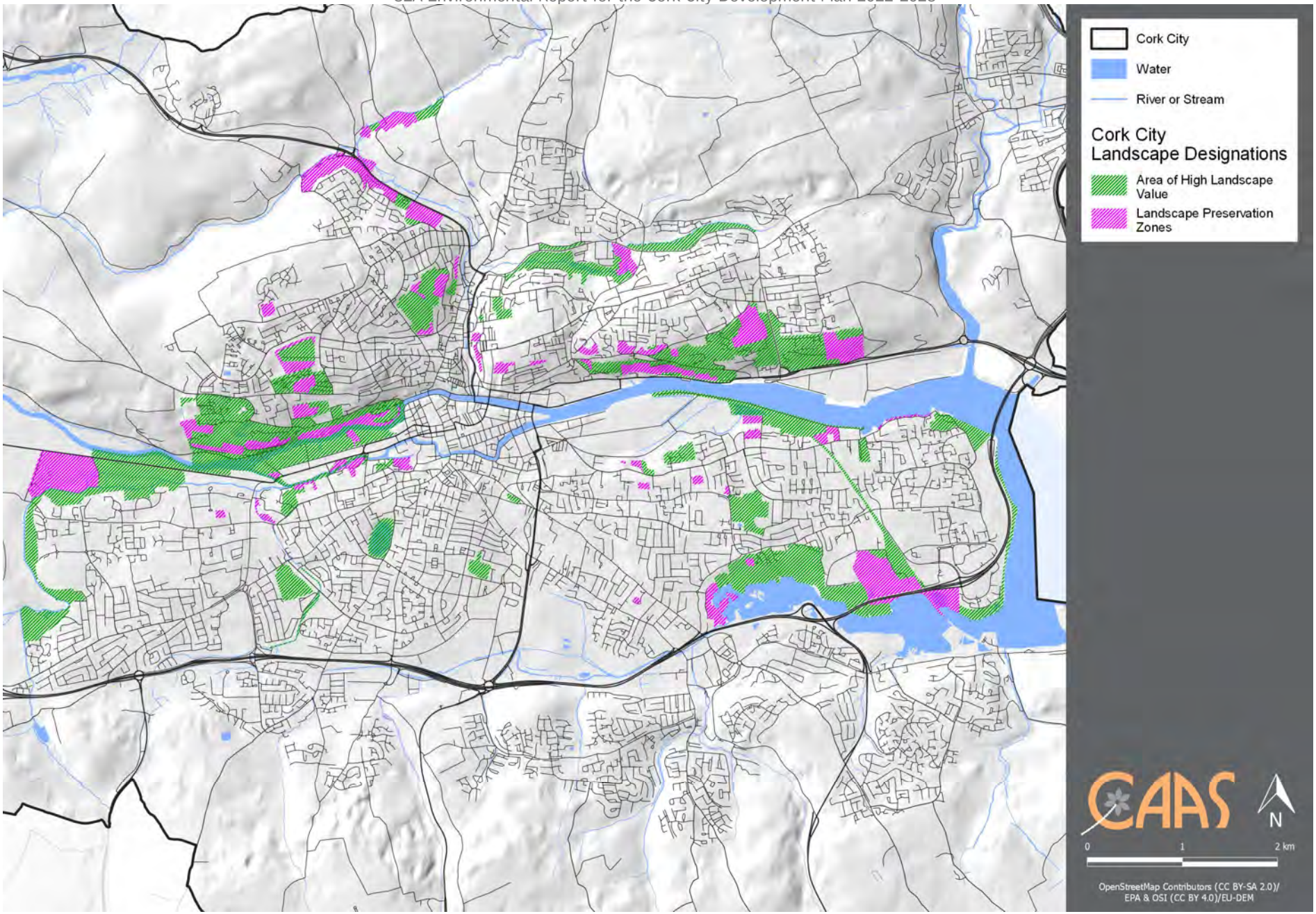

Figure 4.21 Cork City Council Landscape Designations

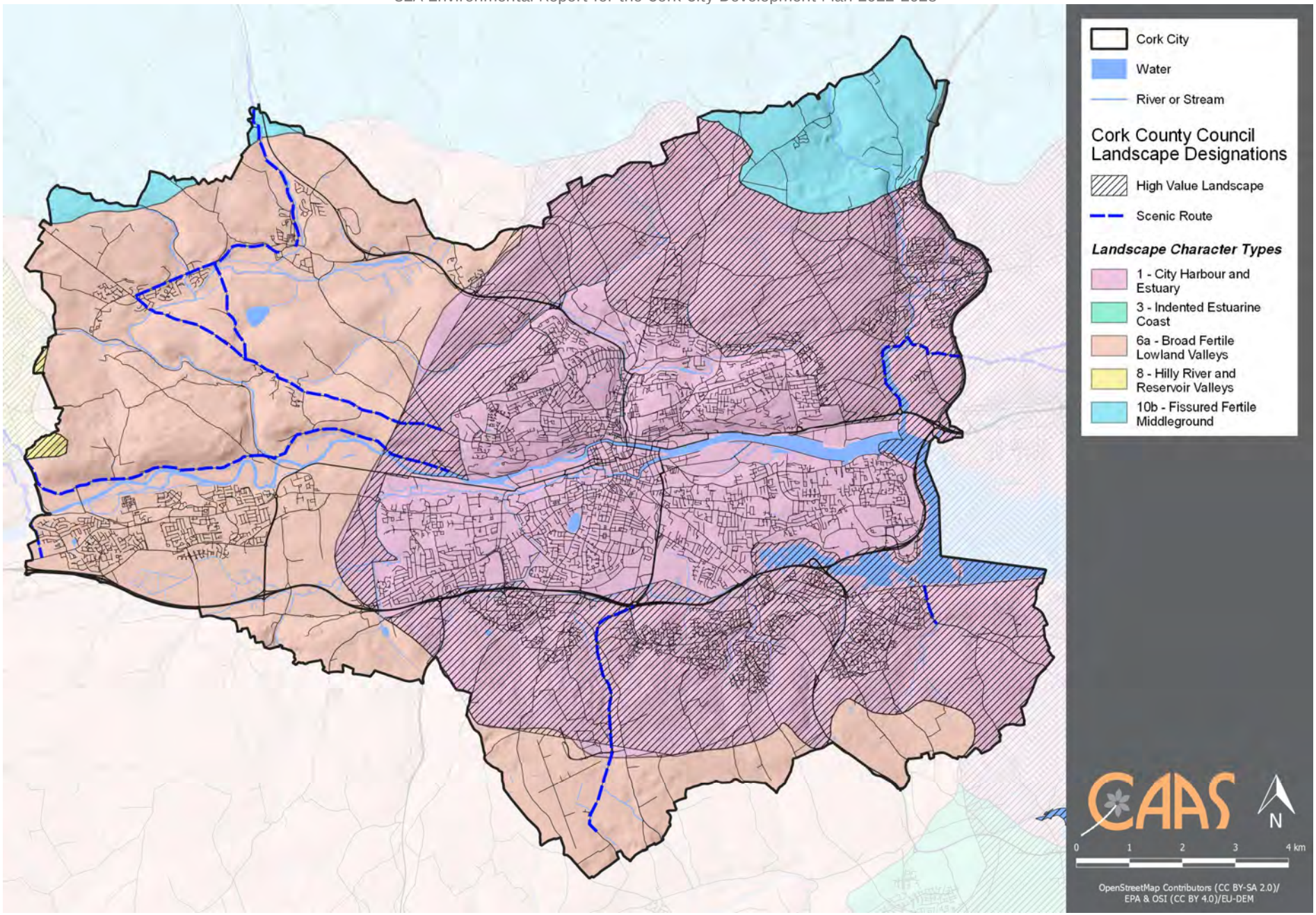

Figure 4.22 Cork County Council Landscape Designations

4.14 Overlay of Environmental Sensitivity Mapping

In order to identify where most sensitivities within the City occur, a number of the environmental sensitivities described above were weighted and mapped overlapping each other.

Figure 4.23 provides an Overlay of Environmental Sensitivities in the City. Environmental sensitivities are indicated by colours which range from higher to lower sensitivity. The map was prepared using Geographical Information System (GIS) software that allowed for a weighting system to be applied with differentiation in certain layers as follows:

- European Sites – SACs and SPAs (10 points);
- Other Ecological designations – NHAs and pNHAs (5 points);
- Sensitive Landcover Categories (10 points);
- WFD Status of Surface moderate and unassigned ecological status (5 points);
- WFD Status of groundwater poor ecological status (10 points);
- Groundwater vulnerability (aquifers which are extremely vulnerable - 10 points; and highly vulnerable - 5 points);
- WFD RPA Nutrient Sensitive Rivers and Lakes and Estuaries (10 points) and Rivers in Nutrient Sensitive Areas (5 points);
- GSI Landslide Susceptibility (High or High Inferred – 10 points; Moderately High or Moderately High Inferred – 5 points);
- Geological Sites (10 points);
- Cultural Heritage including: Architectural Conservation Areas, entries to the Record of Protected Structures, entries to the Record of Monuments and Places, SMR and RMP Zones of Notification, National Monuments in State Care and entire to the National Inventory of Architectural Heritage (10 points);
- WFD RPA Nutrient Sensitive Estuaries (10 points) and Rivers Nutrient Sensitive Areas (5 points);
- WFD RPA Rivers for Drinking Water (10 points);
- WFD RPA Salmonid River Regs (S.I. 293 only) (10 points) and Rivers in Salmonid Regs and Surface Waters in Salmonid Regs (5 points);
- WFD RPA Surface Water in Shellfish Areas (5 points);
- Flood Zone A (10 points) and Flood Zone B (5 points);
- Scenic Views (10 points);
- Landscape Sensitivity: High (10 points);
- Cork City Landscape Designations: Historic Street Character Areas, Landscape Preservation Zones and Area of High Landscape Value (10 points).

Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with these sensitivities and cause environmental deterioration. However, the occurrence of environmental sensitivities does not preclude development; rather it flags at a strategic level that the mitigation measures - which have been integrated into the Plan - will need to be complied with in order to ensure that the implementation of the Plan contributes towards environmental protection.

The overlay mapping shows that environmental sensitivities are not evenly distributed throughout the City. Most of the City is of a low to moderate sensitivity due to the low level of environmental sensitivities occurring.

Higher levels of environmental sensitivities are found:

- In the City centre, as a result of cultural heritage sensitivities;
- Across much of the City Harbour and Estuary landscape character type, much of which is covered by a High Value Landscape designation;
- In areas of Extreme and High groundwater vulnerability, which occur across much of the Plan area; and
- Within and adjacent to the River Lee and its tributaries and Cork Harbour, on account of various water, ecological, flood risk and landslide risk (along the steeper valleys) sensitivities.

The EPA-funded Environmental Sensitivity Mapping Web Tool could assist in lower-tier consideration of plans and projects.

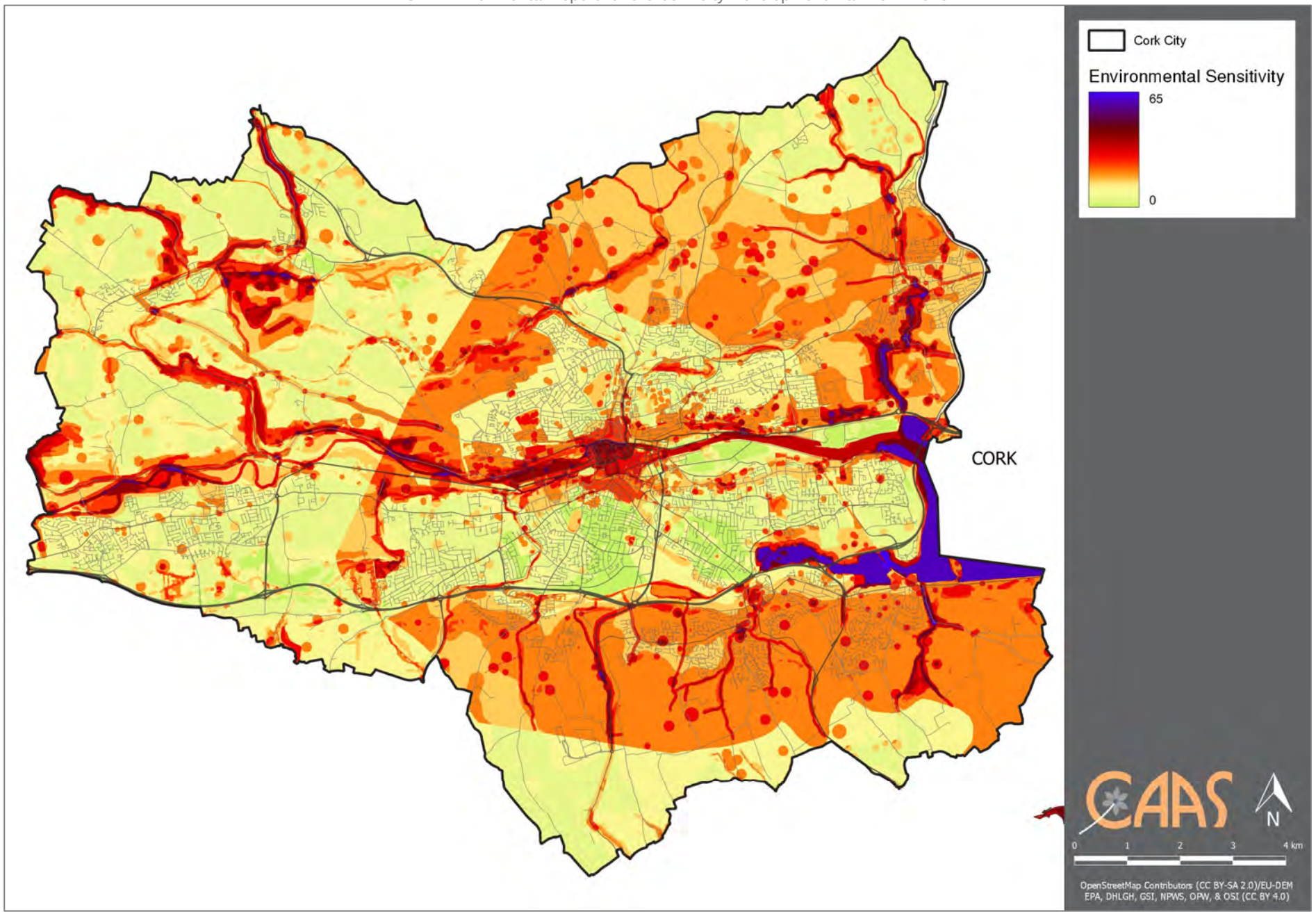

Figure 4.23 Overlay of Environmental Sensitivities in Cork City

Section 5 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and which are required to be implemented.

The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if – in the case of adverse effects – unmitigated.

The SEOs are linked to indicators which can facilitate monitoring the environmental effects of the Plan as well as identifying targets which the Plan can help work towards.

All SEOs, indicators and targets are provided on Table 5.1 overleaf.

Further detail on legislation, plans and programmes are provided under Section 2 (and associated Appendix I ''Relationship with Legislation and Other Policies, Plans, and Programmes'') and Section 4.

Given the position of the Development Plan in the land use planning hierarchy beneath RSES, the measures identified in the RSES SEAs, including the Southern RSES SEA, have been used – as they are or having been slightly modified – in most instances. This consistency across the hierarchy of land use plans will improve the efficiency and effectiveness of future monitoring.

Table 5.1 Strategic Environmental Objectives (SEOs), Indicators and Targets

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species • Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function • Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species • Enhance biodiversity in line with the National Biodiversity Action Plan and its targets • To protect, maintain and conserve the City's natural capital	• Condition of European sites	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, the City's Heritage and Biodiversity Plan
				• Number of spatial plans that have included ecosystem services content, mapping and policy to protect ecosystem services when their relevant plans are either revised or drafted	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, the City's Heritage and Biodiversity Plan
				• SEAs and AAs as relevant for new Council policies, plans, programmes etc.	• Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc.
				• Status of water quality in the City's water bodies	• Included under Water below
				• Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 6 "Green and Blue Infrastructure Open Space and Biodiversity"	• For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing for the protection of biodiversity and flora and fauna – see Chapter 6 "Green and Blue Infrastructure Open Space and Biodiversity"
Population and Human Health	**PHH**	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	• Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management • Ensure that existing population and planned growth is matched with the required public infrastructure and the required services • Safeguard the City's citizens from environment-related pressures and risks to health and well-being	• Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 4 "Economy and Employment"	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 4 "Economy and Employment" • By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps (Also relevant to Material Assets)
				• Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan	• No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan
				• Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures
				• Number of spatial plans that include specific green infrastructure mapping	• Require all local level land use plans to include specific green infrastructure mapping

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
Soil (and Land)	**S**	Ensure the long-term sustainable management of land	• Protect soils against pollution, and prevent degradation of the soil resource • Promote the sustainable use of infill and brownfield sites over the use of greenfield sites • Safeguard areas of prime agricultural land and designated geological sites	• Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets)	• Maintain built surface cover nationally to below the EU average of 4% as per the NPF • In accordance with National Policy Objectives of the National Planning Framework, a minimum of 50% of the housing growth targeted in the City is to be delivered within the existing built-up footprint • To map brownfield and infill land parcels across the City
				• Instances where contaminated material generated from brownfield and infill must be disposed of	• Dispose of contaminated material in compliance with EPA guidance and waste management requirements
				• Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission	• Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission
Water	**W**	Protection, improvement and sustainable management of the water resource	• Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive • Ensure water resources are sustainably managed to deliver proposed regional and City growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals	• Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD	• Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' • Implementation of the objectives of the River Basin Management Plan
				• Number of incompatible developments permitted within flood risk areas	• Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk
Material Assets	**MA**	Sustainable and efficient use of natural resources	• Optimise existing infrastructure and provide new infrastructure to match population distribution proposals - this includes transport infrastructure • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development	• Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	• All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan • Where individual on-site wastewater treatment systems are proposed, for planning permission to be only granted when applications demonstrate that the outfall from the individual on-site wastewater treatment system will not – in- combination with other septic tanks – contribute towards any surface or ground water body not meeting the objective of good status under the Water Framework Directive • Facilitate, as appropriate, Irish Water in developing water and wastewater infrastructure • See also targets relating to greenfield and brownfield development of land under Soil and broadband under Population and Human Health

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
			• Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart- buildings, towns and grids	• Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health — Air Quality Directive • Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels	• Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% • NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring	• Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels • Improvement in Air Quality trends, particularly in relation to transport related emissions of NO_x and particulate matter
Climatic Factors [59]	**C**	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	• To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into the City's infrastructure(e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport	• Implementation of Plan measures relating to climate reduction targets	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets
				• A competitive, low-carbon, climate-resilient and environmentally sustainable economy	• Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050
				• Share of renewable energy in transport	• Contribute towards the target of the Renewable Energy Directive (2009/28/EC), for all Member States to reach a 10% share of renewable energy in transport by facilitating the development of electricity charging and transmission infrastructure, in compliance with the provisions of the Plan
				• Carbon dioxide (CO_2) emissions across the electricity generation, built environment and transport sectors	• Contribute towards the target of aggregate reduction in carbon dioxide (CO_2) emissions of at least 80% (compared

[59] Please also refer to relevant legislation and requirements under Section 4.10, Section 8.6, Section 8.8.5 and Appendix I. Targets under the national Climate Action Plan are reviewed and updated periodically and include those under the headings of Electricity, Built Environment, Transport, Agriculture, Forestry & Land Use and Enterprise.

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives	Indicators	Targets
					to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors
				• Energy consumption, the uptake of renewable options and solid fuels for residential heating	• To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating
				• Proportion of journeys made by private fossil fuel-based car compared to 2016 levels	• Decrease in the proportion of journeys made by residents of the City using private fossil fuel-based car compared to 2016 levels
				• Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage	• Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan	• Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan
				• Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan	• Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan
Landscape	**L**	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention	• Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan	• No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan

Section 6 Description of Alternatives

6.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment.

Based on the outputs of Cork City Capacity Study and other relevant supporting documents that directly informed the preparation of the Plan, Cork City Council have identified three alternatives from an initial sift of the following four options:

1. City Wide Growth Strategy
2. Transport Orientated Development no.1 (applying narrow walking bands)
3. Transport Orientated Development no.2 (applying wider walking bands)
4. Compact Liveable Growth

Option 2 has been discounted as this scenario is over reliant on the delivery of the light rail transport in the City, which is currently at the initial stage of design (route selection process). The construction and delivery of the light rail transport is a long-term project (post-2031) within the Cork Metropolitan Area Transportation Study (CMATS).

Cork City Council assessed the three remaining alternatives for the Plan, to determine whether or not they are available and appropriate, as detailed in Section 7.

6.2 Limitations in Available Alternatives

The Plan is required to be prepared in accordance with the Planning and Development Act 2000 (as amended), which specifies various types of objectives that must be provided for within the Plan.

The SEA alternatives prepared for the Plan are limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Southern Region. These documents set out various requirements for the content of the Plan, in particular the Core Strategy.

The Minister for Housing, Planning and Local Government also issues statutory guidelines to planning authorities. Planning Authorities must have regard to these in carrying out their functions, including in the preparation of the City Development Plan. They cover a wide range of issues including architectural heritage, childcare facilities, landscape, residential density and design, environmental assessment and development management. New ministerial guidelines on Housing Strategies and Housing Needs Demand Assessment have recently to inform the preparation of the City Development Plan.

6.3 NPF Targets for Growth in Cork City 2022-2028

The Core Strategy sets out population targets within the Plan. These targets draw on the policies and targets set out for Cork City and the Cork Metropolitan Area within the NPF 2040 (February 2018), the NPF Roadmap (July,2018) and the RSES for the Southern Region (January, 2019). The Joint Draft Cork Housing Strategy provides the accompanying rationale for these targets in the context of the recently published DHLGH Housing Strategy Guidance, which is based on the ESRI's "Regional Demographics and Structural Housing Demand at a County Level" Report (December 2020).

Cork City Council needed to adjust the NPF and RSES population targets to account for the recent changes to its administrative area (officially extended on 31st May 2019). The +25% transitional allowance set out in Section 3(a) of the NPF Roadmap has also been added. It should also be noted that the low built out numbers within Cork City, for the period 2017 – (Q2) 2022 (estimated average of

+736 units per year), result in the need to for significant "catch up" in order to achieve the NPF/RSES target figures from the baseline year of 2016.

Having regard to all of the above, the following population targets were set out in the Core Strategy as part of the Draft Plan and have also informed the assessment of the three alternative scenarios presented below.

Table 6.1 Available Strategic Reasonable Alternatives

Population Targets for Cork City 2022-2028	
Annual population target	+ 7,839 persons
Total population target	+ 47,034 persons

6.4 Description of Alternative Scenarios Targets for Growth

This section provides a brief description of the three alternatives considered.

Alternative 1: City Wide Growth

This alternative applies the densities allowable under the existing land uses zonings set out in the Cork City Development Plan 2015-2022 and the relevant zonings in the Cork County Municipal District Local Area Plans (2017). As such the alternative combines Cork City Councils and Cork County Councils current land use planning approach to the recently extended City Council area.

This scenario gives a full understanding of the current land use planning approach for the current Cork City administrative area, as extended on May 2019. The yields from all extant planning permissions are accounted for. Where no extant planning permission exists an average density, assumption has been applied based on the relevant land use zoning objective.

Alternative 2: Transport Orientated Development

This alternative focuses on the key transport routes and land use areas identified in the Cork Metropolitan Area Transportation Strategy (CMATS). A Transport Orientated Development approach is applied to future land use planning, by maximising the provision of housing, employment, public services and leisure space within close proximity to existing and future transport nodes (e.g. rail and/or bus) that are serviced by frequent, high quality services.

This alternative applies different densities at different locations, as appropriate; with higher densities where sustainable transport mode opportunities are planned for (e.g. light rail transport route). The yields from all extant planning permissions are accounted for.

Alternative 3: Compact Liveable Growth

This alternative seeks to develop Cork City as a compact, sustainable city of scale and the regional driver of growth by creating sustainable, liveable, integrated communities and neighbourhoods while ensuring that at least half (50%) of all new homes are delivered in the existing built up footprint.

A tiered approach to land use zoning us applied ensuring that new homes are provided at appropriate densities in brownfield and infill locations and in greenfield locations within and contiguous to existing City footprint.

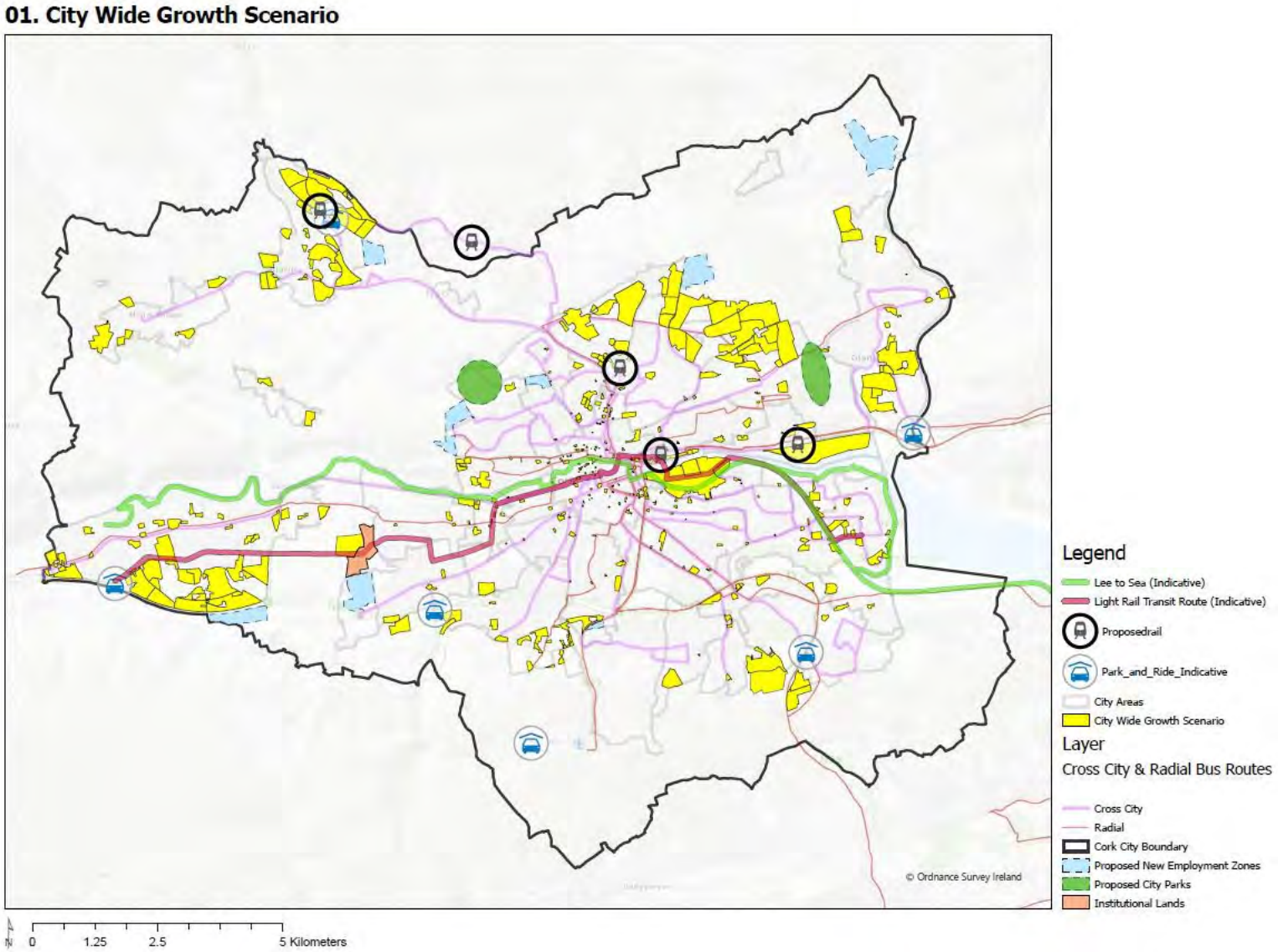

Figure 6.1 Alternative 1: City Wide Growth

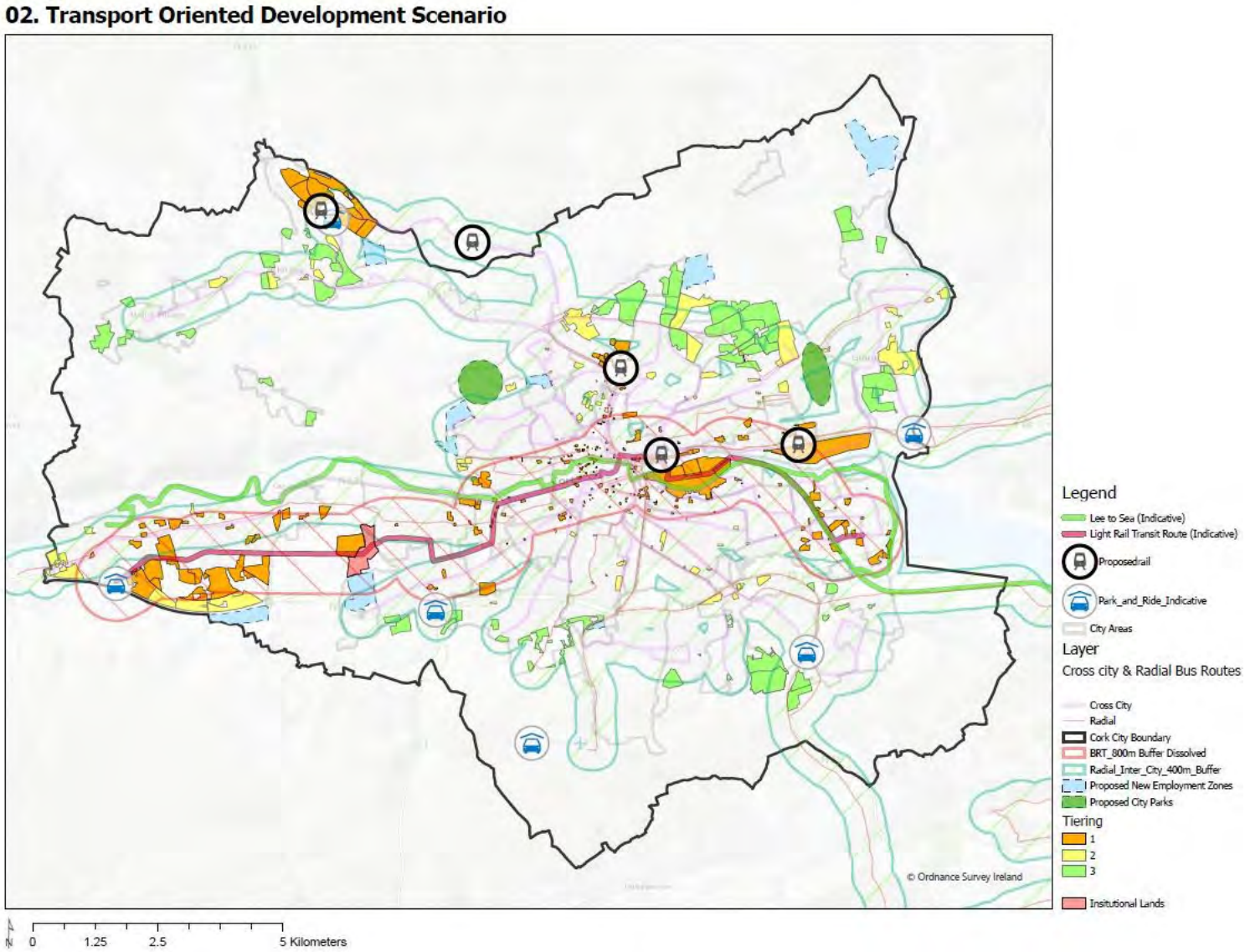

Figure 6.2 Alternative 2: Transport Orientated Development

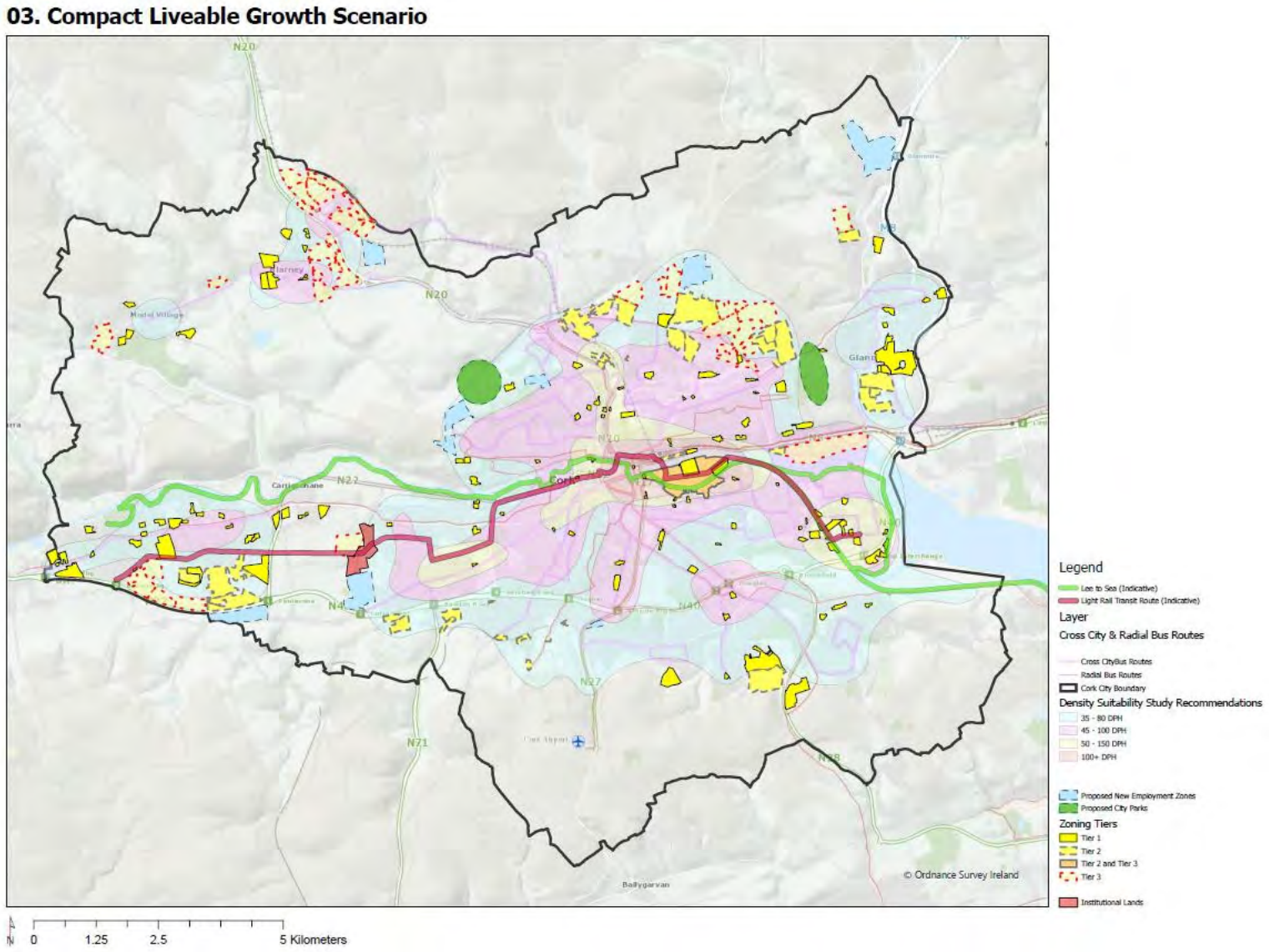

Figure 6.3 Alternative 3: Compact Liveable Growth

Section 7 Evaluation of Alternatives

7.1 Introduction

This section provides a comparative evaluation of the likely significant environmental effects[60] of implementing available alternatives that are described in Section 6. This determination sought to understand whether each alternative was likely to improve conflict with or have a neutral interaction with the receiving environment.

7.2 Methodology

The degree to which effects can be determined is limited as implementation of the Plan will involve assessment, consideration and decision-making associated with lower tier plans and individual projects. Nonetheless a comparative evaluation of the various alternatives can be provided.

Alternatives are also assessed against the nine "Strategic Objectives" that directly inform the objectives, policies and actions set out in each of the sections of the plan. These Strategic Objectives were expressed as defining principles in the Pre-Plan Consultation Issues Paper published by Cork City Council in June 2020. The Strategic Objectives are detailed in full under Section 8.8.1 of this report and relate to:

- Compact Growth
- Delivering Homes and Communities
- Movement and Connectivity
- Climate and Environment
- Green and Blue Infrastructure, Open Space and Biodiversity
- Economy And Employment
- Heritage, Culture, Arts and Tourism
- Environmental Infrastructure
- Placemaking and Managing Development

The alternatives are also assessed against the relevant aspects of the current state of the environment and the Strategic Environmental Objectives (see Table 7.1). The extent of natural and artificial land covers zoned for new residential and new employment developed under each alternative is quantified.

Table 7.1 Strategic Environmental Objectives[61]

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species • Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function • Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species • Enhance biodiversity in line with the National Biodiversity Action Plan and its targets • To protect, maintain and conserve the City's natural capital
Population and Human Health	**PHH**	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	• Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management • Ensure that existing population and planned growth is matched with the required public infrastructure and the required services • Safeguard the City's citizens from environment-related pressures and risks to health and well-being

[60] These effects include secondary, cumulative (see also Section 8.2), synergistic, short, medium and long-term permanent and temporary, positive and negative effects.
[61] See also Section 5

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Soil (and Land)	**S**	Ensure the long-term sustainable management of land	• Protect soils against pollution, and prevent degradation of the soil resource • Promote the sustainable use of infill and brownfield sites over the use of greenfield sites • Safeguard areas of prime agricultural land and designated geological sites
Water	**W**	Protection, improvement and sustainable management of the water resource	• Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive • Ensure water resources are sustainably managed to deliver proposed regional and City growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals
Material Assets	**MA**	Sustainable and efficient use of natural resources	• Optimise existing infrastructure and provide new infrastructure to match population distribution proposals - this includes transport infrastructure • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart- buildings, towns and grids
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health — Air Quality Directive • Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels
Climatic Factors	**C**	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	• To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into the City's infrastructure(e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	**L**	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

7.3 Detailed Assessment of Alternatives

7.3.1 Effects Common to all Alternatives

Each of the alternatives would be part of a wider Plan envisaging – in compliance with the robust policy framework in place at national, regional and local level – sustainable development and compact growth in Cork City generally. As such, common environmental effects (as detailed on Table 7.2) would be present under Plans adopting each of the different alternatives, though to varying degrees.

Table 7.2 Effects common to Plans adopting each of the different alternatives

Environmental Component	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated
Biodiversity and Flora and Fauna	• Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond. • Sustains existing sustainable rural management practices – and the communities who support them – to ensure the continuation of long-established managed landscapes and the flora and fauna that they contain.	Arising from both construction and operation of development and associated infrastructure: • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.
Population and Human Health	• Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond.	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.
Soil	• Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond.	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank and coastal erosion.
Water	• Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond.	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects associated with flood events.

Environmental Component	• Significant Positive Effect, likely to occur	• Potentially Significant Adverse Environmental Effects, if unmitigated
Material Assets	• Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth.	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure. • Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.
Air and Climatic Factors	• Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond.	• Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management.
Cultural Heritage	• Contributes towards protection of cultural heritage elsewhere by facilitating development within an existing built footprint.	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.
Landscape	• Contributes towards protection of wider landscape and landscape designations by facilitating development within an existing built footprint.	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.

7.3.2 Assessment of Extent of Natural and Artificial Landcovers Zoned for New Residential and Employment Zone Development

Using GSI, an assessment of the extent of natural and artificial landcovers zoned for new residential and employment zone development under each alternative is provided on Table 7.3.

Table 7.3 Comparative Assessment of Extent of Natural and Artificial Land Covers to be Developed under each of the Alternatives

Alternative (selected alternative in **bold**)	**New Residential and Employment Zone Area (ha)**	
	Natural Landcover	Artificial Landcover
Alternative 1: City Wide Growth Scenario	**1,083.9**	**457.6**
Alternative 2: Transport Orientated Development Scenario	**1,083.9**	**457.5**
Alternative 3: Compact Liveable Growth Scenario	**1054.1**	**348.8**

7.3.3 Assessment against Strategic Objectives for the Plan

Each alternative is assessed against the Strategic Objectives (detailed in full under Section 8.8.1 of this report) on Table 7.4.

Table 7.4 Comparative Assessment of each of the Alternatives against the Strategic Objectives

Strategic Objectives	Relevant SEOs	Alternative 1: City Wide Growth Scenario		Alternative 2: Transport Orientated Development Scenario		Alternative 3: Compact Liveable Growth Scenario	
		Assessment	**Findings**	**Assessment**	**Findings**	**Assessment**	**Findings**
Compact Growth	**BFF PHH S W MA A C CH L**	Focuses on a wide range of strategically important expansion areas including City Docklands, Tivoli, South Ballincollig (Maglin), East Blarney, Stoneview, Ballyvolane, Blackpool North and South East Glanmire. Infill and regeneration sites in the City Centre and city suburbs are also identified. Low (15-25 units per hectare) to Medium (35-50 units per hectare) Densities are generally applied to all major sites, apart from City and Tivoli Docks. Large areas of Strategic Land Reserves (SLRs) are identified on the outer fringes of the existing city to provide for longer term planning and delivery outside the period of this plan.	This scenario presents the largest expansion of lands outside of the city's existing urban footprint. Major expansion is identified for the north and southeast of the city, that requires significant additional infrastructure (physical and social). The densities applied outside the City Centre and City Docks only partially achieve the NPFs requirement for compact growth. The SLRs provide for necessary long-term planning of infrastructure required to meet both the ambitious NPF 2040 growth targets for the city and the existing need for "catch-up" from the 2016 baseline used.	Focuses on key transport corridors and associated land use areas set out in CMATS. 400m (5 minute) and 800m (10 minute) walking bands from transport stops are applied to inform a transport orientated development approach to the city's land use plan. The indicative routes for the future planned delivery of the LRT, Greenways and BusConnects routes indicated in CMATS are applied Expansion is focused on City Docklands, Tivoli, South Ballincollig (Maglin), Mahon, Stoneview and Blackpool North. A wide range of infill and regeneration sites in the City Centre and city suburbs are also identified. These are designated as tier 1 lands. A mix of Medium (35-50 units per hectare) and high (80-100 units per hectare) densities are applied to all major sites depending on their location, with higher densities applied to City Docks and Tivoli Docks (100+ units per hectare). Tier 2 lands are designated at locations adjoining or in close proximity to Tier 1 lands. Tier 3 lands are identified in Ballyvolane, Glanmire Southeast, Blarney east and other locations tom allow for longer term planning to enable and bring forward development post 2028.	This scenario presents a compact approach to expanding the city's existing urban footprint. Medium to high density growth is identified along the core transport corridors enabling high efficiencies of land use. Significant growth is focused along the future LRT route linking Mahon, the City Docks, the City Centre and Balllincollig South (Maglin) Tier 3 lands provide for necessary long- term planning of infrastructure, given the ambitious NPF 2040 growth targets for the city and the existing need for "catch- up" from the 2016 baseline used. In delivering compact growth, this scenario relies on the delivery of all key transport infrastructure set out in CMATS. The tier 3 lands provide for necessary long- term planning of infrastructure required to meet both the ambitious NPF 2040 growth targets for the city and the existing need for "catch-up" from the 2016 baseline used.	Focus on delivering compact liveable growth through the regeneration of strategic sites (City Docks and Tivoli Docks), increased density in the City Centre, the Urban Towns and along key transport corridors identified in CMATS Identifying a focused number of strategic expansion areas including Blackpool North, Ballincollig South (Maglin), Ballyvolane and Glanmire Southeast Enhancing the rich network of existing neighbourhoods, urban towns and hinterland settlements while managing future growth in the hinterland. A wider mix and range of densities are applied (35-150uph) to all sites depending on their location, with higher densities applied to the City Centre and City Docks (100+ units per hectare).	This scenario presents a compact approach to expanding the city's existing urban footprint by enhancing the rich network of existing neighbourhoods, urban towns and hinterland settlements. Medium to high density growth is identified within and adjoining existing neighbourhoods and towns, enabling high efficiencies of land use. Significant growth is focused along the future LRT route linking Mahon, the City Docks, the City Centre and Balllincollig South (Maglin) Given the ambitious NPF 2040 growth targets set for the city and the existing need for "catch-up" from the 2016 baseline, Tier 3 lands are identified for necessary long-term planning.

Strategic Objectives	Relevant SEOs	Alternative 1: City Wide Growth Scenario		Alternative 2: Transport Orientated Development Scenario		Alternative 3: Compact Liveable Growth Scenario	
		Assessment	**Findings**	**Assessment**	**Findings**	**Assessment**	**Findings**
Delivering Homes and Communities	**BFF PHH S W MA A C CH L**	The wide range of expansion areas identified provide a strong opportunity to ensure there is an increased delivery of new homes over the plan period.	The size and dispersed nature of expansion areas is less successful in enhancing and growing the strong network of neighbourhoods in the city. Will require significant new social infrastructural investment.	The number of expansion areas provides good opportunities to increase delivery of new homes, using increased densities, over the plan period.	This scenario is focused on delivering higher density living, requiring a significant shift away from current average housing densities delivered in Cork City over the last 20 years.	The number of expansion areas provides a strong opportunity to increase delivery of new homes, using a range of densities and locations.	This scenario is focused on achieving compact growth by applying a range of densities that build on the character of the existing network of neighbourhoods that make up the city. Increased densities are applied, requiring a significant shift away from current average housing densities delivered in Cork City over the last 20 years.
Movement and Connectivity	**MA A C**	The pattern of development fits well with the CMATS land use scenarios identified to support the delivery of future transport infrastructure projects; LRT, Greenway, BusConnects.	Less successful in delivering compact walkable neighbourhoods due to the scale of the expansion areas identified.	The pattern of development fits well with the CMATS land use scenarios identified to support the delivery of future transport infrastructure projects; LRT, Greenway, BusConnects.	Delivers compact walkable neighbourhoods along key transport corridors.	The pattern of development seeks to enhance the existing network of neighbourhoods and towns that make up the city while supporting the delivery of key future transport infrastructure projects; LRT, Greenway, BusConnects.	Delivers compact walkable neighbourhoods along key transport corridors.
Climate and Environment	**BFF PHH S W MA A C CH L**	A large expansion of lands outside of the city's existing urban footprint.	A large increase in the urban footprint within the city boundary which may have greater impacts in terms of climate and environmental management.	A compact approach to future growth seeking to increase the density of population living within the city's existing urban footprint.	A compact approach to development reduces impacts in terms of climate and environmental management.	A compact approach to future growth seeking to increase the density of population living within the city's existing urban footprint.	A compact approach to development reduces impacts in terms of climate and environmental management.
Green and Blue Infrastructure, Open Space and Biodiversity	**BFF PHH S W MA A C CH L**	A large expansion of lands outside of the city's existing urban footprint.	A large increase in the urban footprint within the city boundary, increasing the need for wider GBI management and demand for large new open spaces. Two new "city parks" are provided for in the north east suburbs and northwest suburbs.	A compact approach to city growth that seeks to focus development within the city's existing urban footprint.	Allows for better GBI management and increases demand for a wider range and form of open spaces within the existing urban footprint. Two new "city parks" are provided for in the north east suburbs and northwest suburbs.	A compact approach to city growth that seeks to focus development within the city's existing urban footprint.	Allows for better GBI management and increases demand for a wider range and form of open spaces within the existing urban footprint. Two new "city parks" are provided for in the north east suburbs and northwest suburbs.
Economy And Employment	**PHH MA**	A strategically focused approach to key employment hubs at different locations.	New employment areas linking to the expansion areas and transport routes.	A strategically focused approach to key employment hubs at different locations.	New employment areas linked to growth areas and transport routes.	A strategically focused approach to key employment hubs at different locations.	New employment areas linked to growth areas and transport routes.
Heritage, Culture, Arts andTourism	**CH L**	Infill and regeneration areas within the existing city are identified for alongside new expansion areas.	Due to the scale of the expansion areas identified, less successful in delivering compact vibrant neighbourhoods that can deliver a culturally rich city focused on enhancing heritage and arts and attract increased levels of tourism.	Infill and regeneration areas within the existing city are identified for alongside new expansion areas.	Allows for the delivery of compact vibrant neighbourhoods that can create a culturally rich city focused on enhancing heritage and arts and attract increased levels of tourism.	Infill and regeneration areas within the existing city are identified for alongside strategic expansion areas.	Allows for the delivery of compact vibrant neighbourhoods that can create a culturally rich city focused on enhancing heritage and arts and attract increased levels of tourism.
Environmental Infrastructure	**S W MA A C**	Requires the delivery of significant new environmental infrastructure.	Lower densities and higher levels of expansion increase the need for new environmental infrastructure.	Focuses the need for significant new environmental infrastructure to provide in key areas.	Higher densities and lower levels of expansion decrease the need for new environmental infrastructure.	Focuses the need for significant new environmental infrastructure to provide in key areas.	Higher densities and lower levels of expansion decrease the need for new environmental infrastructure.
Placemaking and Managing Development	**BFF PHH S W MA A C CH L**	A large expansion of lands outside of the city's existing urban footprint.	Offers strong potential for new place making opportunities in new expansion areas. Less successful in enhancing and growing the existing strong network of neighbourhoods in the city.	A compact approach to city growth that seeks to focus development within the city's existing urban footprint.	Offers strong potential for new place making opportunities near key transport routes. Less successful in enhancing and growing the strong network of neighbourhoods in the city.	A compact approach to city growth that seeks to focus development within the city's existing urban footprint.	Offers strong potential for new place making opportunities within or highly accessible to the existing built fabric of the city. Enhances and grows the strong network of neighbourhoods in the city.

7.3.4 Assessment against Strategic Environmental Objectives

Type 4 alternative is assessed against Strategic Environmental Objectives on Table 7.5, informed by the information provided under Table 7.3 and Table 7.4.

Table 7.5 Comparative Assessment of each of the Alternatives against Strategic Environmental Objectives

Alternative (selected alternative in **bold**)	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs – likely to be mitigated		
	to a **Greater** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree
Alternative 1: City Wide Growth Scenario			**BFF PHH S W MA A C CH L**			**BFF PHH S W MA A C CH L**
Alternative 2: Transport Orientated Development Scenario		**BFF PHH S W MA A C CH L**			**BFF PHH S W MA A C CH L**	
Alternative 3: Compact Liveable Growth Scenario	**BFF PHH S W MA A C CH L**			**BFF PHH S W MA A C CH L**		

7.3.5 Summary and Selected Alternative

Having carried out a spatial assessment of the implications of the Plan that would be provided for by **Alternative 1 "City Wide Growth Scenario"** and the other alternatives, taking account of the higher-level NPF and Southern RSES objectives and the need to comply with the densities set out in Ministerial Guidelines, including those related to the Sustainable Residential Development in Urban Areas (2009) and Urban Development and Building Heights (2018), the Council confirm that Alternative 1 "City Wide Growth Scenario" as applied, would contribute towards proper planning, environmental protection and management and sustainable development to a significant degree less than Alternatives 2 and 3. The scenario allows for significant expansion into the existing city hinterland through the provision of low to medium densities. This scenario does not maximise the significant potential to deliver more appropriate densities to further justify the objective and projects identified in CMATS, particularly the light rail transport. Due to the extent of expansion proposed, this scenario also has greater potential negative impacts in terms of climate change, green and blue infrastructure management, the need for new physical and social infrastructure and the successful delivery of a compact, vibrant city of neighbourhoods.

Having carried out a spatial assessment of the implications of the Plan that would be provided for by **Alternative 2 "Transport Orientated Development Scenario"** and the other alternatives, taking account of the higher-level NPF and Southern RSES objectives and the need to comply with the densities set out in Ministerial Guidelines, including those related to the Sustainable Residential Development in Urban Areas (2009) and Urban Development and Building Heights (2018), the Council confirm that Alternative 2 "Transport Orientated Development Scenario" as applied, would contribute towards proper planning, environmental protection and management and sustainable development to a significant degree less than Alternative 3. The scenario achieves compact growth by focusing future development within areas that are highly accessible to frequent public transport services. The scenario is particularly successful in delivery high densities that can be used to justify the delivery of an LRT for the city in a shorter time frame than is set out in CMATS (post 2031). The compact nature of growth proposed also helps mitigate potential impacts in terms of climate change, green and blue infrastructure management and the reduced need for new physical and social infrastructure. However, this scenario is less

successful in enhancing the existing wide range of neighbourhoods and towns to create a vibrant city of neighbourhoods. This scenario also primarily focuses on delivering higher density living, requiring an immediate and significant shift away from current average housing densities delivered in Cork City over the last 20 years.

Having carried out a spatial assessment of the implications of the Plan that would be provided for by **Alternative 3 "Compact Liveable Growth Scenario"**, taking account of the higher-level NPF and Southern RSES objectives and the need to comply with the densities set out in Ministerial Guidelines, including those related to the Sustainable Residential Development in Urban Areas (2009) and Urban Development and Building Heights (2018), the Council confirm that Alternative 3 "Compact Liveable Growth Scenario" as applied, would contribute towards proper planning, environmental protection and management and sustainable development more than Alternatives 1 and 3. The scenario achieves compact growth by primarily focusing future development within strategic sites, such as City Docks, sites located within the rich existing network of neighbourhoods, urban towns and hinterland settlements in the city and a number of expansion sites adjoining the city. The scenario focuses on developing areas accessible to frequent public transport services, delivering a range of increased densities that justify the delivery of an LRT, BusConnects routes and the Greenways as set out in CMATS. The compact nature of growth proposed also helps mitigate potential impacts in terms of climate change, green and blue infrastructure management and the reduced need for new physical and social infrastructure. This scenario is successful in enhancing the existing wide range of neighbourhoods and towns to create a vibrant city of neighbourhoods. The increased densities proposed in this scenario are challenging, requiring a stepped shift away from current average housing densities delivered in Cork City over the last 20 years.

7.4 Selected Alternatives for the Plan

The selected alternative for the Draft Plan that was placed on public display was Alternative 3 "Compact Liveable Growth Scenario".

However, various alterations (see Section 8.4), were adopted as part of the final Plan that were previously advised against for planning and environmental reasons, meaning that the final, adopted Plan is a mix of Alternatives 1 and 3. These alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning.

7.5 Reasons for Selecting Chosen Alternatives

The selected alternatives for the Plan are indicated above.

These alternatives have been incorporated into the Plan having regard to both:

1. The environmental effects which are identified by the SEA and are detailed above; and
2. Planning - including social and economic - effects.

Section 8 Evaluation of Plan Provisions

8.1 Introduction

This section provides an assessment of environmental effects using the information on the current state of the environment (provided in Section 4) and the Strategic Environmental Objectives (see Table 8.1) from implementation of the Plan.

The degree of significance of effects occurring cannot be fully determined at this level of decision making due to the lack of exact detail available with regard to the type or scale of development that will be permitted under the Plan. However, a strategic assessment can be undertaken.

Table 8.1 Strategic Environmental Objectives[62]

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species • Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function • Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species • Enhance biodiversity in line with the National Biodiversity Action Plan and its targets • To protect, maintain and conserve the City's natural capital
Population and Human Health	**PHH**	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	• Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management • Ensure that existing population and planned growth is matched with the required public infrastructure and the required services • Safeguard the City's citizens from environment-related pressures and risks to health and well-being
Soil (and Land)	**S**	Ensure the long-term sustainable management of land	• Protect soils against pollution, and prevent degradation of the soil resource • Promote the sustainable use of infill and brownfield sites over the use of greenfield sites • Safeguard areas of prime agricultural land and designated geological sites
Water	**W**	Protection, improvement and sustainable management of the water resource	• Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive • Ensure water resources are sustainably managed to deliver proposed regional and City growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals
Material Assets	**MA**	Sustainable and efficient use of natural resources	• Optimise existing infrastructure and provide new infrastructure to match population distribution proposals - this includes transport infrastructure • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies

[62] See also Section 5

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
			• Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart-buildings, towns and grids
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health — Air Quality Directive • Significantly decrease noise pollution by 2020 and move closer to WHO recommended levels
Climatic Factors	**C**	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	• To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into the City's infrastructure(e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	**L**	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

8.2 Cumulative Effects

Cumulative effects are one of the types of effects which have been considered by the assessment of the alternatives. Cumulative effects can be described as the addition of many small impacts to create one larger, more significant, impact.

There are two types of potential cumulative effects that have been considered, namely:

- Potential *intra-Plan* cumulative effects - these arise from the interactions between different types of potential environmental effects resulting from a plan, programme, etc. Where there are elevated levels of environmental sensitivities (such as those identified under Section 4), future development could result in environmental conflicts and lead to a deterioration in environmental integrity. The interrelationships between environmental components that help determine these potential effects are identified on Table 8.4 e.g. interrelationships between: human health and water quality; human health and air quality; human health and flood risk; and ecology and water quality.
- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan occur in combination with those of other plans, programmes, developments, etc.

Effects that may arise as a result of implementing the Plan have been mitigated to the extent that the only residual adverse effects likely to occur as a result of implementation of the Plan are those which are identified under Table 8.2.

Other policies, plans and programmes that have been considered by the assessment of effects include those which are detailed under Section 2.5 (and associated Appendix I ‘‘Relationship with Legislation, Plans and Programmes’’), Section 4 and Section 5. Plans and programmes from various sectors will interact with the Plan, including those relating to land use planning. These plans and programmes are subject to their own environmental assessment requirements as relevant. Examples include:

- Land use policy, plans and programmes (e.g. the National Planning Framework, the Southern Regional Spatial and Economic Strategy and associated Metropolitan Area Strategic Plan, adjoining County Development Plans and Local Area Plans);
- Cork City Local Economic and Community Plan and the Local Economic and Community Plans of adjoining counties;
- Energy policy, plans and programmes (e.g. Grid25 and associated Implementation Programme, Ireland’s National Renewable Energy Action Plan 2010, Strategy for Renewable Energy 2012-2020, Draft National Energy and Climate Plan 2021-2030 and the Renewable Electricity Policy and Development Framework);
- Climate related policy, plans and programmes (e.g. the National Climate Policy Position and Climate Action 2014, Climate Action and Low Carbon Development Act 2015, as amended, and White Paper Ireland’s Transition to a Low Carbon Energy Future 2015, Climate Action Plan 2021, the National Adaptation Framework 2018, and the Cork City Climate Change Adaptation Strategy 2019 and Climate Action Charter 2019);
- Water services, waste management, transport and energy infrastructure plans (e.g. Irish Water’s Water Services Strategic Plan and associated Capital Investment Plan, Southern Regional Waste Management Plan and the Cork Metropolitan Area Transportation Strategy); and
- Environmental protection and management plans (e.g. River Basin Management Plan and Flood Risk Management Plans).

Potential cumulative/in combination effects include:

- Contributions towards reductions in travel related greenhouse gas and other emissions to air, reductions in consumption from non-renewables and associated achievement of legally binding targets (in combination with plans and programmes from all sectors, including energy, transport and land use planning) as a result of facilitating:
    - sustainable compact growth;

    - sustainable mobility/a shift from motorised transport modes to more sustainable and non-motorised transport modes; and
    - renewable energy development.
- Contributions towards travel related greenhouse gas and other emissions to air (in combination with plans and programmes from all sectors, including transport and land use planning) as a result of facilitating development which must be accompanied by road capacity;
- Facilitation of new development that is accompanied by appropriate levels of water services thereby contributing towards environmental protection;
- Need for and use of water and waste water treatment capacity arising from new developments and associated potential adverse effects;
- Potential cumulative effects upon surface and ground water status as a result of, for example, housing and employment – loadings and abstractions;
- Potential cumulative effects (habitat damage, enhancing ecological connectivity, contributing towards sustainable mobility) arising from linear developments, such as those relating to green and blue infrastructure, including beyond the City border;
- Potential cumulative effects on flood risk by, for example, development of greenfield lands or obstruction of flood paths; and
- In combination with plans and programmes from all sectors potential adverse effects on all environmental components arising from all development in greenfield and brownfield areas (e.g. infrastructural, residential, economic, agricultural etc.). The type of these effects is consistent with those described on Table 8.2. These plans and programmes are required to comply with environmental legislation and undergo SEA and AA as relevant comply with environmental legislation while projects are subject to EIA and AA, as relevant.

These effects would have the potential, if unmitigated, if they occurred, to result in changes in the environment within and beyond Cork City.

A variety of the issues covered by the Plan provisions are regional issues which are considered: at Regional Assembly level, in the Southern RSES and by planning authorities across the Region. The solutions to these issues are often regional solutions which are subject their own consenting procedures. Works arising outside of the Plan as a result of providing for new development within the City including those arising as a result of the cumulative provision of development in the wider Southern region would potentially conflict with a number of environmental components, across the wider Southern region and beyond, including: ecology, soil function, the status of water bodies and the landscape. Some of these conflicts would be mitigated by measures which will be integrated into the Plan while some will be mitigated by measures arising out of separate consent procedures.

8.3 Overall Evaluation

Cork City Council have integrated various recommendations arising from the SEA, AA and SFRA processes into the Plan (see Section 9). Table 8.2 provides a detailed overall evaluation of the environmental effects arising from the Plan. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation through both provisions integrated into the Plan – see Section 9.

Taking into account, *inter alia*, the detailed mitigation which has been integrated into the Plan (including that which is identified at Section 9), it has been determined that significant residual adverse environmental effects will not occur.

Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Strategic Environmental Objective (SEO) codes are taken from Table 8.1.

Table 8.2 Overall Evaluation – Effects arising from the Plan

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Southern RSES and associated Metropolitan Area Strategic Plan, the Cork Metropolitan Area Transportation Strategy, adjacent Development Plans and lower-tier land use plans			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Biodiversity and Flora and Fauna	• Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond. • Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. • Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna. • Sustains existing sustainable rural management practices – and the communities who support them – to ensure the continuation of long-established managed landscapes and the flora and fauna that they contain.	Arising from both construction and operation of development and associated infrastructure: • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.	• Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. • Losses or damage to ecology (these would be in compliance with relevant legislation).	**BFF**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Southern RSES and associated Metropolitan Area Strategic Plan, the Cork Metropolitan Area Transportation Strategy, adjacent Development Plans and lower-tier land use plans			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Population and Human Health	• Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond. • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond. • Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water.	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	• Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under "Soil", "Water" and "Air and Climatic Factors" below.	**PHH**
Soil	• Contribution towards the protection of soils (including those used for agriculture) and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond. • Contribution towards the protection of the environment from contamination the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank and coastal erosion.	• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces. • Riverbank erosion will continue to occur naturally over time and is likely to be enhanced by climate change.	**S**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Southern RSES and associated Metropolitan Area Strategic Plan, the Cork Metropolitan Area Transportation Strategy, adjacent Development Plans and lower-tier land use plans			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Water	• Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the City Centre and the City's suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the City and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. • Contribution towards flood risk management and appropriate drainage.	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects associated with flood events.	• Any increased loadings as a result of development to comply with the River Basin Management Plan. • Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan.	**W**
Material Assets	• Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond. • Contribution towards compliance with national and regional water services and waste management policies. • Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. • Contribution towards reductions in average energy consumption per capita including promoting sustainable compact growth, sustainable mobility, sustainable design and energy efficiency.	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure. • Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.	• Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. • Residual wastes to be disposed of in line with higher-level waste management policies. • Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework.	**MA**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Southern RSES and associated Metropolitan Area Strategic Plan, the Cork Metropolitan Area Transportation Strategy, adjacent Development Plans and lower-tier land use plans			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Air and Climatic Factors	• Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the City Centre and the City's suburbs) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the City and beyond. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: o Sustainable compact growth; o Sustainable mobility, including walking, cycling and public transport; o Drainage, flood risk management and resilience; o Sectors including energy and buildings; and o Sustainable design, energy efficiency and green infrastructure.	• Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management.	• An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable compact growth and sustainable mobility. • Interactions between noise emissions and sensitive receptors. Various provisions have been integrated into the Plan to ensure that noise levels at sensitive receptors will be minimised.	**AC**
Cultural Heritage	• Contributes towards protection of cultural heritage elsewhere by facilitating development within an existing built footprint. • Contributes towards protection of cultural heritage within an existing built footprint by facilitating brownfield development and regeneration.	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.	• Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.	**CH**
Landscape	• Contributes towards protection of wider landscape and landscape designations by facilitating development within an existing built footprint.	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	• Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments that will occur in compliance with the Plan's landscape protection measures.	**L**

8.4 Instances whereby Environmental Considerations were not integrated into the Plan

The Plan, considered as a whole, contributes towards environmental protection and management and sustainable development and complies with various legislative requirements. This is identified throughout the SEA documentation.

Various Plan provisions that would contribute towards the sustainable development of the City would, at the same time, have the potential to conflict with the environment, were mitigation measures not taken into account. This is normal and mitigation measures have been integrated into the Plan to deal with these potential effects.

However, a number of alterations were adopted by the Elected Members as part of the Plan that are internally inconsistent with the overall approach provided for by the Plan, including those which are identified on Table 3.1 and were advised against by the Plan-preparation/SEA process. Also included on Table 3.1 is advice that was provided by the SEA for consideration in advance of adoption of the Plan.

It is noted that a number of alterations that were recommended against in advance of public display were subsequently subject to minor modification mitigating environmental concerns (Amendments No. 275, 277 and 2.64)

Table 8.3 Alterations Advised Against but Adopted (including:)

Material Alterations No's.	Commentary provided in advance of Plan Adoption	Mitigation Identified	Recommendation provided in advance of Plan Adoption
Amendment 2.27 (subject to modification), Amendment 2.29, Amendment 2.60, Amendment 2.61, Amendment 2.62, Amendment 2.63, Amendment 2.68, Amendment 2.69, Amendment 2.70, Amendment 2.72, Amendment 2.76, Amendment 2.78, Amendment 2.95, Amendment 2.96, Amendment 2.99 (subject to modification), Amendment 1.127, Amendment 1.307 (subject to modification), Amendment 2.3, Amendment 2.4, Amendment 2.24, Amendment 2.25 and Amendment 2.26	These alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning. As a result they would present additional, unnecessary and potentially significant adverse effects on various environmental components, including soil, water, biodiversity, the landscape, air and climatic factors and material assets. Land use zoning proposed is considered to be premature under various alterations in the context of current population targets. Potentially significant adverse unnecessary effects, would be likely to include: • Effects on ecology, ecological connectivity and non-designated habitats and species • Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces • Conflict with efforts to maximise sustainable compact growth and sustainable mobility • Occurrence of adverse visual impacts (including erosion of designated Landscape Preservation Zones) • Increased loadings on water bodies • Effects on an aquifers of elevated and high vulnerability Where such alterations are further from the centre of urban/suburban areas and are greenfield sites, potentially significant unnecessary adverse effects would be likely to include: • Difficulty in providing adequate and appropriate waste water treatment as a result of zoning outside of established built development envelopes of established built development envelopes • Adverse impacts upon the economic viability of providing for public assets and infrastructure • Adverse impacts upon carbon emission reduction targets in line with local, national and European environmental objectives • Conflicts between transport emissions, including those from cars, and air quality • Conflicts between increased frequency of noise emissions and protection of sensitive receptors • Potential effects on human health as a result of potential interactions with environmental vectors Taking into account the above, there is a need to reject these amendments in their current state in order to ensure proper planning and sustainable development. Furthermore, Amendment 2.99 was found to potentially conflict with proper flood risk management and not comply with the Flood Risk Management Guidelines; there would be potential risk to environmental components including human health and material assets. As a result, there is a need to reject this amendment in its current state in order to comply with the Flood Risk Management Guidelines.	These alterations would not provide the most evidence-based framework for development and have the potential to undermine sustainable development and proper planning. As a result, there is a need to reject these amendments in their current state in order to provide the most evidence-based framework for development and ensure sustainable development and proper planning.	Do not adopt as part of Plan

8.5 Appropriate Assessment and Strategic Flood Risk Assessment

Stage 2 Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) have been undertaken alongside the preparation of the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA assesses the effects of the Plan on European Sites designated for certain habitats and species. The conclusion of the AA is that the Plan will not affect the integrity of the Natura 2000 network[63]. SFRA is required by 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. Recommendations from the SFRA have been integrated into the Plan. Various policies and objectives have been integrated into the Plan through the SEA, SFRA and AA processes. The preparation of the Plan, SEA, AA and SFRA has taken place concurrently and the findings of the AA and SFRA have informed both the Plan and the SEA.

8.6 Integration of Climate Action into the Plan

The Plan will contribute towards climate action in combination with:

- The Climate Action Plan that identifies 493 climate mitigation and/or adaptation actions, including: Action 214 Rollout of Social Housing National Retrofitting Programme in 2021 with retrofitted properties required to reach BER B2 or equivalent; Action 190 Ensure national, regional, and local planning frameworks encourage and facilitate the development of district heating where appropriate to facilitating compact urban development; and Action 78 Implement the National Planning Framework.
- The National Planning Framework, which has identified National Strategic Outcome Objectives 8 "Build Climate Resilience" and 9 "Support the transition to low carbon and clean energy" under National Strategic Outcome 8 "Transition to a Low Carbon and Climate Resilient Society".
- The Southern Regional Spatial and Economic Strategy that has identified various Regional Policy Objectives relating to climate action, including RPOs 87-107 under "Climate action and transition to a low carbon economy".

Climate Action is provided for throughout the Plan, and is focused upon at Chapter 5 "Climate Change and the Environment".

Climate Action Measures from the Plan encompass a wide range of issues and sectors including:

- A Climate Resilient City
- International and National Climate Change Legislation, Policy and Guidance
- International Climate Change Research and Recognition
- Coordinated Regional Action on Climate Change
- Climate and Environmental Action Strategies
- Climate Change Projects
- Sustainable Energy Community
- Cork City Decarbonising Zone
- A Just Transition
- Energy Conservation and Efficiency
- Energy Efficiency Considerations
- Energy Use Management
- Waste Management – Construction and Operation of Development
- Adaptable Design
- Lifetime Adaptable Housing
- Renewable and Low Carbon Energy
- Heat Pumps
- Roof-Top Solar Photovoltaic/Thermal Panels
- Sustainable Energy Generation – Standalone Projects
- Cork City District Energy Action Plan
- District Heating
- Electric Vehicles
- Rainwater Harvesting
- Green and Blue Infrastructure

[63] Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available;
(b) imperative reasons of overriding public interest for the plan/programme/project to proceed; and
(c) adequate compensatory measures in place.

8.7 Interrelationship between Environmental Components

The SEA Directive requires the Environmental Report to include information on the likely significant effects on the environment, including on issues such as biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. Likely significant effects on environmental components which are identified include those which are interrelated; implementation of the Plan will not affect the interrelationships between these components. The presence of significant interrelationships between environmental components is identified on Table 8.4.

Table 8.4 Presence of Interrelationships between Environmental Components

Component	Biodiversity, flora and fauna	Population and human health	Soil	Water	Air and Climatic factors	Material assets	Cultural heritage	Landscape
Biodiversity, flora and fauna		Yes	Yes	Yes	Yes	Yes	No	Yes
Population and Human Health			Yes	Yes	Yes	Yes	No	No
Soil				Yes	No	Yes	No	No
Water					No	Yes	No	No
Air and Climatic Factors						Yes	No	No
Material Assets							Yes	Yes
Cultural Heritage								Yes
Landscape								

8.8 Detailed Evaluation[64]

For an explanation of SEO codes e.g. **BFF**, **PHH**, **S**, **W**, etc. refer to Table 8.1 on page 85.

The following applies to each of the sub-sections 8.8.1 to 8.8.13 below:

> The Plan is situated in a hierarchy of documents setting out public policy setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management, such as the Effects include in-combination effects that are planned for through the wider planning framework including the National Planning Framework, the National Development Plan, the National Adaptation Framework, the Climate Action Plan and the Regional Spatial and Economic Strategy for the Southern Region and associated Metropolitan Area Strategic Plan and the Cork Metropolitan Area Transportation Strategy (for additional detail please refer to Section 2.5 *"Relationship with other relevant Plans and Programmes"* in this report).
>
> These other existing policies, plans etc. have been subject to their own environmental assessment processes, as relevant, and already provide for various measures that have been compiled into the Plan. The Plan aligns with these documents and will be incorporated into the review and preparation of these documents.
>
> Lower tier plans and projects must be consistent and comply with the provisions of the Plan and of these other policies, plans etc. and will be subject to their own project level EIA and AA requirements as relevant. An assessment of cumulative effects is provided at Section 8.2 of this report.

[64] The Plan's provisions are evaluated using compatibility criteria in order to determine how they would be likely to affect the status of the existing environment and the SEOs. The SEOs and the Plan provisions are arrayed against each other in order to demonstrate which interactions would cause effects on specific components of the environment. Where the appraisal identifies an interaction with the status of an SEO the relevant SEO code is entered into the relevant column.

The interactions identified are reflective of likely significant environmental effects:

1. Interactions that would be likely to improve the status of a particular SEO ("Likely to Improve status of SEOs") would be likely to result in a significant positive effect on the protection/management of the environmental component/issues to which the SEO relates.
2. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated ("Mitigated Conflicts") would be likely to result in a potential significant negative effect however these effects would be likely to be mitigated by measures which have been integrated into the Plan.
3. Interactions with SEOs, the negative effects of which would be unlikely to be mitigated are identified as "Probable Conflict with status of SEOs – unlikely to be mitigated".

These effects include secondary, cumulative (see also Section 8.2), synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

8.8.1 Chapter 1: Introduction

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to the Plan's Strategic Vision and Key Strategic Principles. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's provisions from the introductory chapter, including the Plan's Strategic Vision and Key Strategic Principles, against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The Plan's Strategic Vision and Key Strategic Principles would contribute towards sustainable development and the protection and management of the environment.

8.8.2 Chapter 2: Core Strategy

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to the Plan's Core Strategy. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's Core Strategy against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The Core Strategy and Settlement Strategy would contribute towards sustainable development and the protection and management of the environment – examples of important Objectives for the environment include those relating to "United Nations Sustainable Development Goals", "Climate and Environment", "Green and Blue Infrastructure, Open Space and Biodiversity", "Environmental Infrastructure" and "SEA Monitoring".

8.8.3 Chapter 3: Delivering Homes and Communities

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Delivering Homes and Communities. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's Homes and Communities provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The Housing provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment.

8.8.4 Chapter 4: Transport and Mobility

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Transport and Mobility. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's Transport and Mobility provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

Many of the provisions in this Chapter primarily contribute towards maximising sustainable mobility and associated interactions with emissions to air (including noise and greenhouse gas emissions), energy usage, air quality and human health. The facilitation of journeys by car, in particular, would give rise to emissions to air. The Plan references various projects that are provided for by higher level plans and programmes, particularly the Cork Metropolitan Area Transport Strategy. Objective 4.5 provides for a Corridor & Route Selection Process for certain transport infrastructure projects (including greenways, walkways, cycleways and blueways).

The development of new greenways, blueways and walking and cycling routes, including those between Cork City, the adjoining County area and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams and along coasts and estuaries. Potential adverse effects would be mitigated both by measures that have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the Corridor and Route Selection Process under Objective 4.5. The development of green and blue infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

8.8.5 Chapter 5: Climate and the Environment

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Climate and the Environment. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary:

The assessment of the Plan's Climate Change and Environment provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

Climate Action provisions would contribute towards sustainable development and the protection and management of the environment.

Various provisions in this Chapter contribute towards the framework for the development of energy. These Policies Objectives would contribute towards achieving various government objectives and targets including those relating to climate mitigation and reducing greenhouse gas emissions and increasing the amount of energy to be consumed from renewable sources. The development of renewable energy would have the potential to adversely impact upon the environment, if unmitigated. Further general commentary on the types of potential effects arising from a range of renewable energy types is provided under section 8.8.9.

Please also refer to Section 8.6 "Integration of Climate Action into the Plan".

8.8.6 Chapter 6: Green and Blue Infrastructure, Open Space and Biodiversity

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Green and Blue Infrastructure, Open Space and Biodiversity. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary:

The assessment of the Plan's Green and Blue Infrastructure, Open Space and Biodiversity provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The focus of most of the provisions in this Chapter is the protection and management of the City's natural heritage (including the landscape and it's various components, including biodiversity, water and cultural heritage).

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The development of new greenways, blueways and walking and cycling routes, including those between Cork City, the adjoining County area and beyond has the potential to contribute towards sustainable mobility and a better management of movements in sensitive areas, thereby benefitting various environmental components including habitats at certain locations. The development of these projects, however, presents a variety of potentially adverse environmental effects that would, if unmitigated, have the potential to arise from both the construction and operation of such developments and/or their ancillary infrastructure. These types of infrastructure are often constructed in ecologically and visually sensitive areas adjacent to the banks of rivers and streams and along coasts and estuaries. Potential adverse effects would be mitigated both by measures that have been integrated into the Plan which provide for and contribute towards environmental protection, environmental management and sustainable development (including those identified at Section 9 of this report) and by measures arising from lower tier assessments (including those for the preparation of lower tier plans and projects). Projects would need to be subject to normal planning and environmental assessment processes, as well as complying with the Corridor and Route Selection Process under Objective 4.5. The development of green and blue

infrastructure can achieve synergies with regard to the provision of open space amenities, sustainable mobility, the sustainable management of water, the protection and management of biodiversity, the protection of cultural heritage and the protection of protected landscape sensitivities.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

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8.8.7 Chapter 7: Economy and Employment

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Economy and Employment. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's Economy and Employment provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

This Chapter contributes towards the provision of land use activities and developments relating to tourism – and would be likely to contribute towards an increase in the number and dwell time of visitors and associated potential adverse effects. Such effects would include in-combination effects arising from services and infrastructure to service development, including tourism. Examples may include developments/operation of developments relating to water services, transport, energy, access or accommodation.

Mitigation has been integrated into various Economy and Employment provisions, including:

- Strategic Objective 6: Economy and Employment "high-quality architectural, landscape and urban design and placemaking, and will integrate with sustainable transport networks"
- DM Objective 7.8 Mobility Management Plans
- Objective 7.24 Sustainable Tourism: "Seeking to manage, where appropriate, any increase in visitor numbers to semi-natural areas in order to avoid significant effects including loss of habitat and disturbance, by ensuring that new any projects, such as greenways, are located a suitable distance from ecological sensitivities, such as riparian zones; Seeking to manage, where relevant, any increase in visitor numbers to key habitats and / or any change in visitor behaviour in order to avoid significant effects, including loss of habitat and disturbance, by ensuring that new projects and activities are located a suitable distance from ecological sensitivities. Visitor / Habitat Management Plans may be required for proposed projects where relevant and as appropriate."

8.8.8 Chapter 8: Heritage, Arts and Culture

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Heritage, Arts and Culture. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's Heritage, Arts and Culture provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The Heritage, Arts and Culture provisions in this Chapter of the Plan would contribute towards sustainable development and the protection and management of the environment.

8.8.9 Chapter 6: Environmental Infrastructure and Management

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Environmental Infrastructure and Management. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's Environmental Infrastructure and Management provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

Provisions relating to water supply and wastewater and surface water drainage would, by protecting water resources, providing safe drinking water and appropriately treating waste water, contribute towards the protection of various environmental components including: human health, biodiversity and flora and fauna, the status of waters, flood risk management and soil. There would be potential for significant adverse environmental effects upon various environmental components to arise during construction of water services infrastructure. Such potential significant adverse effects could also arise during operation: the protection of human health, biodiversity and flora and fauna and the status of waters, could all be conflicted with by outflows and abstractions.

Flood risk management provisions would contribute towards the protection and management of human health, biodiversity, flora and fauna, cultural heritage, water status and existing infrastructure and services. Flood risk management infrastructure (if required) has the potential to result in significant adverse environmental effects during construction and operation on most environmental components. These types of infrastructure are often constructed in ecologically and visually sensitive areas and adjacent to the banks of rivers and streams. Potential adverse effects will be mitigated both by measures which have been integrated into the Plan (including those identified at Section 9 of this report) and by measures arising from lower tier assessments.

Waste Management provisions incorporate circular economy principles that are supported in the RSES.

Various provisions in this Chapter contribute towards the framework for the development of energy. These Policies Objectives would contribute towards achieving various government objectives and targets including those relating to climate mitigation and reducing greenhouse gas emissions and increasing the amount of energy to be consumed from renewable sources. The development of renewable energy would have the potential to adversely impact upon the environment, if unmitigated. Further general commentary on the types of potential effects arising from a range of renewable energy types is provided below.

Solar Energy
Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets
Potential Negative Effects, if unmitigated:

- Potential impacts on architectural heritage – including the context of this heritage – at micro scale
- Potential impacts on habitats and species and micro scale
- Large scale installations may have visual impacts – these would depend on perception of the relevant area

Wind Energy
Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets
Potential Negative Effects, if unmitigated:

- Potential impacts include those associated with construction and operation of the turbines and ancillary facilities and infrastructure (including roads and electrical infrastructure)
- Potential human health impact: shadow flicker, noise, and impacts arising from landslides
- Potential impact upon designated and non-designated biodiversity and flora and fauna including birdlife and marine habitats
- Potential interactions leading to change in structure of soil and geology and changes to drainage
- Potential impacts on water status during construction – this could interact with drinking water sources and biodiversity
- Potential impacts upon the context of protected archaeological and architectural heritage – including the context of this heritage – as well as unknown archaeological heritage
- Potential impacts upon traffic during construction due to transportation of turbine components
- Changes to the character of areas would be likely to occur however visual impacts would depend on various factors including the size, number and spacing of the turbines, perception of the relevant areas and any cumulative effect arising from multiple wind farms

Geothermal Energy
Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets.
Potential Negative Effects, if unmitigated:

- Potential impacts upon the status of waters and ecology contained within, especially arising from changes in the temperature of groundwater which can impact upon the structure and ecology of the aquifer and any dependent surface waters - this could interact with drinking water sources
- Potential interactions leading to change in structure of soil and geology
- Potential impacts upon archaeology, including unknown underground archaeology
- Potential impacts upon on site water services
- Potential impacts upon context of archaeological and architectural heritage arising from surface installation

Bio-Energy
Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets. Can provide for the use of agricultural and other wastes
Potential Negative Effects, if unmitigated:

- Potential impact upon designated and non-designated biodiversity and flora and fauna arising from changes in vegetation. Soil structure may also be impacted upon.
- Changes in farming practices may lead to changes in drainage and runoff which could impact upon biological and chemical status of waters - - this could interact with drinking water sources and biodiversity
- Potential human health impact: odour and noise from operation of plants
- Potential impacts upon traffic during operation due to transportation of fuel to plants
- Fuels derived from bio-mass still produce emissions however these are less than those derived from fossil fuels
- Changes to the land cover of areas could occur however visual impacts would depend on perception of the relevant area;
- Biomass plants may have visual impacts - these would depend on perception of the relevant area

Hydro-Energy
Positive Effects: Contribution towards renewable energy and minimisation of greenhouse gases targets
Potential Negative Effects, if unmitigated:

- Depending on the scale and location of the development there is potential for impacts to occur on biodiversity, in particular aquatic biodiversity
- Potential to impact upon the morphological, biological and chemical status of waters - this could interact with drinking water sources (in freshwater) and biodiversity
- Potential interactions leading to change in structure of soil and geology and sediment regimes in rivers
- Operation could impact upon flood risk elsewhere
- Potential impacts upon archaeological heritage or nearby architectural heritage, including context
- Changes to the character of locations may occur however visual impacts would depend upon, inter alia, the size of the installation, ancillary facilities and the perception and visibility of the relevant area

Provisions under the headings of Water Quality, Air Quality, External Lighting, Noise and Seveso would primarily contribute towards the protection and management of the environment, with all environmental components benefitted.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

8.8.10 Chapter 10: Key Growth Areas and Neighbourhood Development Sites

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to the Plan's Key Growth Areas and Neighbourhood Development Sites. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary

The assessment of the Plan's Key Growth Areas and Neighbourhood Development Sites provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

Many of these provisions would contribute towards urban regeneration that will contribute towards sustainable mobility, minimising increases in energy usage and emissions to air, including greenhouse gas emissions and other emissions. Such development would also avoid the need to develop more sensitive greenfield lands elsewhere in the City's Hinterland and beyond, thereby avoiding potential adverse effects on various environmental components.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

The provisions of this Chapter would contribute towards sustainable development and the protection and management of the environment.

Mitigation has been integrated into various Key Growth Areas and Neighbourhood Development Sites provisions, including Objectives relating to:

- City Centre Infill Development
- City Centre Transport, Mobility and Accessibility
- City Centre Public Realm
- City Centre Maritime Heritage
- City Centre Heritage and Biodiversity
- The River Lee
- City Docks Built Heritage
- City Docks A Climate resilient development
- Tivoli Green and Blue Infrastructure
- Protection of Hinterland
- Protection of Natural Landscape

The framework plan to allow for the co-ordinated and sustainable growth of the Airport (Objective 10.51 Strategic Development of Cork Airport) would be subject to its own assessment processes as relevant.

8.8.11 Chapter 11: Placemaking and Managing Development

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Placemaking and Managing Development. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary:

The assessment of the Plan's Development Management and Placemaking provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The focus of most of the provisions in this Chapter is the protection and management of the City's environment and the achievement of proper planning and sustainable development.

The provisions in this Chapter of the Plan would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

8.8.12 Chapter 12: Land Use Zoning

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
Provisions of this Chapter include those relating to Land Use Zoning. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary:

The assessment of the land use zoning provisions against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

The provisions from this chapter would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

Environmental considerations were integrated into the land use zoning through an interdisciplinary approach involving Planners and environmental consultants. Zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF and Southern RSES and associated MASP. The detailed Plan preparation process undertaken by the Planning Department combined with input from consultants seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity;

- The detailed Plan preparation process undertaken by the Planning Department combined with input from SEA and AA consultants facilitated zoning that avoids impacts upon sensitive ecology and European Sites. The AA concludes that the Plan, including Town and Village Plans will not affect the integrity of the Natura 2000 network of European Sites[65].
- The detailed Plan preparation process undertaken by the Planning Department combined with input from SFRA consultants facilitated zoning that avoid inappropriate development being permitted in areas of high flood risk.
- The planning team also took into account other environmental considerations including sustainable mobility and sensitivities relating to cultural heritage, landscape and water, as well as taking into account overlay mapping of environmental sensitivities (see County level mapping at Figure 4.23 on page 66).

Where reasonable alternatives in relation to the application of land use zoning were identified by the Planning Team as being available these were considered by the iterative Plan-preparation/SEA process (see Sections 6 and 7 of this report).

There are a wide range of land use types identified under most of the Land Use Zoning Objectives. Proposals for development will need to demonstrate compliance with the various written provisions of the Plan, as relevant, including those relating to environmental protection and management. Environmental considerations, such as those related to elevated levels of flood risk or ecological sensitivities may limit the types of uses that may be possible at certain sites. The written provisions of Chapter 12 were informed by the SEA, AA and SFRA process – many of the Objectives above would contribute towards the protection and management of the environment.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

8.8.13 Chapter 13: Implementation

	Likely to **Improve** status of SEOs	Probable **Conflict** with status of SEOs – unlikely to be mitigated	**Mitigated Conflicts**	**No Likely** interaction with status of SEOs
This Chapter sets out how the Plan will be implemented. For more details, please refer to the Plan.	**BFF PHH S W MA A C CH L**		**BFF PHH S W MA A C CH L**	

Commentary:

The assessment of the Implementation chapter against Strategic Environmental Objectives (SEOs BFF, PHH, S, W, MA, A, C, CH and L) is consistent with the:

- Environmental effects detailed under subsections 8.2 to 8.7 of this report; and
- Assessments of the selected alternatives for the Plan provided at Section 7 of this report.

Implementing the Plan will help to direct incompatible development away from the most sensitive areas in the City and focus on directing: compact, sustainable development within and adjacent to the existing built-up footprint of the City, including its surrounding settlements; and sustainable development elsewhere. Development of areas within and adjacent to the existing built-up footprint, which are generally more robust, better serviced and better connected, will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development can be accompanied by placemaking initiatives to enable the City to become a more desirable place to live – so that it can sustainably accommodate new residents and maintain and improve services to existing and future communities. Compatible sustainable development in the City's sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

This chapter would contribute towards the Statutory consent granting and decision-making framework for land use developments and activities, and sustainable development of the City, in combination with other Plan provisions and other plans, programmes, strategies, etc. Potential adverse environmental effects arising from land use development and activities include in-combination effects arising from services and infrastructure to service development, for example those relating to water services, transport and energy.

The SEA process that has been undertaken alongside the preparation of the Plan has brought about various changes to the emerging Plan through an iterative process. Some of these measures are reproduced under Section 9 "Mitigation Measures" of this report. By integrating SEA recommendations into the Plan, Cork City Council is helping to ensure that:

- The potential significant adverse effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan, in combination with implementation of other provisions from the Plan and other plans, programmes, etc., are maximised.

[65] Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be: (a) no alternative solution available, (b) imperative reasons of overriding public interest for the plan to proceed; and (c) adequate compensatory measures in place.

Section 9 Mitigation Measures

9.1 Introduction

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan. Various environmental sensitivities and issues have been communicated to the Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes. By integrating all related recommendations into the Plan, the Council have ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

Mitigation was achieved through the:

- Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development;
- Considering alternatives for the Plan;
- Integration of environmental considerations into zoning provisions of the Plan; and
- Integration of individual SEA, AA and SFRA provisions into the text of the Plan.

9.2 Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development

Far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval, the placing of the Draft Plan on public display and the adoption of the Plan, Cork City Council undertook various works in order to inform the preparation of the Plan.

The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development within the City.

Strategic work undertaken by the Council includes background work in relation to Plan Strategies and other provisions for a variety of sectors.

9.3 Consideration of Alternatives

Although strategic alternatives in relation to the content of the Plan were significantly limited for the Plan (see Section 6), as part of the Plan preparation/SEA process, the Council considered a number of alternatives for the Plan.

These alternatives were assessed by the SEA process (see Section 7) and the findings of this assessment informed the selection of preferred alternatives, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

9.4 Integration of environmental considerations into Zoning of the Plan

Environmental considerations were integrated into the Plan's zoning through an interdisciplinary approach.

Zoning has been applied in a way that primarily seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF and Southern RSES.

The detailed Plan preparation process undertaken by the Planning Department combined with input from consultants seeks to facilitate zoning that will help to avoid inappropriate development being permitted in areas of elevated sensitivity, such as in areas at risk of flooding or ecological sensitivity. Various provisions have been integrated into the Plan that provide for flood risk management and ecological protection and management at project level.

Also taken into account were environmental sensitivities relating to ecology, cultural heritage, landscape and water, as well as the overlay mapping of environmental sensitivities.

9.5 Integration of individual SEA, AA and SFRA provisions into the text of the Plan

Various provisions have been integrated into the text of the Plan through the Plan-preparation and SEA, SFRA and AA processes. Both the Planning and the assessment teams contributed towards the mitigation which was developed over multiple iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes.

Table 9.1 links key mitigation measure(s) to the likely significant effects of implementing the Plan, if unmitigated. The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could help to minimise flood risk and the protection of human health, for example.

Table 9.1 Integration of Environmental Considerations into the Plan

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
Various – see below	Various – see below	**Objective 2.42 SEA Monitoring** The Council shall, in conjunction with the Southern Regional Assembly and other stakeholders as relevant, implement the monitoring programme as set out in the SEA Environmental Report and Statement. This will include the preparation of stand-alone SEA Monitoring Reports: 1. To accompany the report required of the manager under section 15(2) of the Act, including information in relation to progress on, and the results of, monitoring the significant environmental effects of implementation of the development plan; 2. On the significant environmental effects of implementing the Plan, in advance of the beginning of the review of the next Plan. **Objective 4.6 Corridor & Route Selection Process** Policies and Objectives relating to new roads and other transport infrastructure projects (including greenways, walkways, cycleways and blueways) that are not already provided for by existing plans/ programmes or are not already permitted, are subject to the undertaking of feasibility assessment having regard to normal planning considerations and environmental sensitivities as identified in the SEA Environmental Report and the objectives of the Plan relating to sustainable mobility. **Objective 7.25 Sustainable Tourism** To support the sustainable growth of tourism and marketing of Cork City as a multi-faceted visitor destination and a gateway to the southern region, Wild Atlantic Way and Ireland's Ancient East by: • Working in partnership with Fáilte Ireland, businesses and other stakeholders to support tourism investment, innovation and promotional and marketing strategies. • Supporting the implementation of the Cork City Tourism Strategy 2017-2022, the Local Economic and Community Plan-2016-2021 (Pure Cork) and their successor strategies. • To support the implementation of the Tourism Destination Plan for Cork City and East Cork. • Develop existing tourist attractions and activities, while seeking investment in new attractions that help to diversify the tourism market. • Support the development of cultural facilities such as the Crawford Art Gallery and the Cork Events Centre. • Support initiatives that improve the sustainability of tourism, and support eco-tourism along with the reduction of the carbon footprint of tourist accommodation, attractions and activities. • Support high quality proposals, initiatives and pilot projects that represent opportunities to provide new or enhanced visitor facilities and attractions. This also extends to proposals that utilise technology to improve visitors' experiences and aid interpretation and navigation and seek to better leverage the City's network of green and blue infrastructure as tourism attractions. • Seeking to manage, where appropriate, any increase in visitor numbers to semi-natural areas in order to avoid significant effects including loss of habitat and disturbance, by ensuring that new any projects, such as greenways, are located a suitable distance from ecological sensitivities, such as riparian zones. • Seeking to manage, where relevant, any increase in visitor numbers to key habitats and / or any change in visitor behaviour in order to avoid significant effects, including loss of habitat and disturbance, by ensuring that new projects and activities are located a suitable distance from ecological sensitivities. Visitor / Habitat Management Plans may be required for proposed projects where relevant and as appropriate. **Objective 7.38 Cork Harbour Planning Framework** Cork City Council is committed to part-take as a key stakeholder and consultee in the preparation of a Cork Harbour Planning Framework Initiative, in coordination with other Local Authorities and stakeholders in the harbour area, as required under RSES Objective 79 and Cork MASP Objective 3 Cork Harbour, during the lifetime of the Plan. Cork City Council supports the preparation of an agreed framework to guide planning policy in managing the future development of the Cork Harbour Economy (CHE) as set out in RPO79 of the RSES to ensure that the sustainable development of the area not only harnesses the economic and social benefits to the City-region but also ensures that biodiversity, flora and fauna both within and outside protected sites are considered via the appropriate SEA and AA mechanisms. **Objective 9.20 Seveso** (a) Assessment of Development in Vicinity of Seveso III Sites: Land use proposals for development within the vicinity of sites identified under the Control of Major Accident Hazards Directive and any regulations, under any enactment, giving effect to that Directive, will be assessed having regard to technical guidance provided by the Health and Safety Authority. (b) Relocation of Seveso III Sites: Cork City Council will actively seek the relocation of Seveso III facilities / activities to suitable alternative sites outside the City. **Various Development Management Provisions.** **Objective Chapter 2** Core Strategy: To co-ordinate and enable active land management with the delivery of key infrastructure and regeneration projects, Cork City Council will prepare a framework plan for the existing and emerging built environment in and around the central city area. The plan will seek to co-ordinate the delivery of compact liveable growth by facilitating the planning and design of the following land use related issues: • Active land management of strategic underutilised sites • Inter connections between the City Centre, City Docks and Tivoli Docks. • Enable high levels of mobility connecting BusConnects Cork, the proposed LRT route and the emerging Lee to Sea Greenway • Land use planning around planned transport interchanges • Built Heritage and Conservation, including maritime heritage • GBI implementation, Natural Heritage, and Biodiversity management • Co-ordinating Placemaking objectives at a local level • River Transport and Mobility (including water-based transport and recreation) • River use management to balance demand and potentially conflicting interests. **Table 6.4 17. Maritime Activities and Recreation Hub:** To support the planning, design and delivery of a multi-use maritime activities and recreation hub in the Marina along the River Lee. The hub shall enhance the recreational, natural and cultural heritage value of the River Lee by improving access, activities and use of the water including water-based leisure activities and land site facilities such as rowing, light craft, swimming and other suitable active and passive recreational activities. Planning and design shall include stakeholders engagement designed to

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		facilitate safe, improved accessibility to the water and the exploration of co-location and sharing of community, enterprise, recreation and open space infrastructure that helps create a community based maritime hub for the city and wider area. **Objective 6.3** Cork City Council will seek to work with stakeholders in facilitating safe, improved accessibility to the water environment including the River Lee and Cork Harbour and encouraging uses which optimise the amenity, tourism, recreation and leisure opportunities associated with this blue infrastructure, while contributing towards the protection of protected species and without adversely impacting on the day-to-day economic functions of these assets.
Biodiversity and flora and fauna	Arising from both construction and operation of development and associated infrastructure: • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.	**Strategic Biodiversity Goals** (1) To protect and enhance designated areas of natural heritage and protected species and to adhere to all relevant biodiversity legislation; (2) To ensure that sites and species of natural heritage and biodiversity importance in non-designated areas are identified, protected and managed appropriately; (3) To create green and blue infrastructure network thereby creating ecological corridors linking areas of biodiversity importance; (4) To implement the recommendations of the GBI study and integrate green and blue infrastructure solutions into new developments; (5) To ensure all citizens are within 5km of a green and ideally wild space; (6) To protect and maintain the integrity and maximise rivers and watercourses within the city; (7) To protect and enhance the city's trees and urban woodlands; and (8) To promote best practice guidelines for management, control and eradication of invasive alien species. **Green and Blue Infrastructure, Open Space and Biodiversity Development Objectives** **Strategic Objective 5: Green and Blue Infrastructure, Open Space and Biodiversity** To strengthen the green and blue infrastructure of Cork City. To protect and promote biodiversity and habitat connectivity and protect natural areas. To protect and enhance Cork City's unique landscape character and maritime heritage. To ensure all of Cork City's residents have access to open spaces, recreation and amenity facilities and natural areas. A strong green and blue infrastructure network is essential to the quality of life of Cork City's residents and contributes towards the creation of places where people want to live and work. It is an objective of Cork City Council to achieve a healthy, green and connected City with high-quality and interconnected open spaces, parks, diverse natural areas and green and blue corridors. Proposals for new development in Cork City will respect and reflect the topography, landscape and ecology of the City, and will protect and enhance the City's green and blue infrastructure by ensuring that development does not fragment existing networks of green and blue infrastructure. Proposals for new development will demonstrate how green and blue infrastructure, open space, sport and recreation, landscape and biodiversity are considered commensurate to the scale and context of the development in the development process. Large-scale developments will incorporate open spaces to contribute to the green and blue infrastructure in the City. **Objective 6.5 Trees and Urban Woodland** (a) To protect and enhance the City's tree and urban woodlands in public and private ownership. Cork City Council will seek to survey, map and maintain existing important individual and groups of trees, using Tree Preservation Orders as appropriate. (b) To encourage the planting of new urban woodlands and trees where appropriate throughout the City and particularly where there are deficiencies in tree coverage as identified in the Cork City Green and Blue Infrastructure Study. (c) To support the preparation of a City Tree Strategy which provides a vision for long-term planting, protection and maintenance of trees, hedgerows and woodlands. (d) To support retaining existing trees and the planting of new trees as part of new developments subject to care on the species of tree and the siting and management of the trees to avoid conflict with transport safety and residential amenity in particular. (e) To promote the planting of pollinator friendly native deciduous trees and mixed forestry to benefit biodiversity. **Objective 6.6 Rivers, Waterway and Wetlands** (a) To protect and maintain the integrity, and maximise the potential, of the natural heritage and biodiversity value of rivers, associated watercourses and wetlands in Cork City, and to (b) To promote an integrated approach to optimising opportunities associated with rivers, waterways and wetlands generate biodiversity, recreation, tourism, and economic benefits. **Objective 6.22 Natural Heritage and Biodiversity** (a) To protect, promote and enhance Cork City's natural heritage and biodiversity. (b) To support the implementation of the National Biodiversity Plan and the All-Ireland Pollinator Plan and successor publications in Cork City. (c) To support and implement the biodiversity actions from the Cork City Heritage and Biodiversity Plan (2021-2026) in partnership with all relevant stakeholders. (d) Cork City Council will seek to establish and use a City biodiversity database, accessible across all council departments for consideration in land management decision-making. (e) Cork City Council will work with communities to enhance, and the delivery of new, biodiversity-rich areas throughout the City including individual buildings, streets, public and private spaces by supporting the provision of green roofs and walls, rain gardens, biodiversity-rich parklets, rainwater harvesting, natural banks and naturalised SUDS. (f) Cork City Council will seek, where appropriate, to enhance the linear habitat connectivity, including the interconnection and enhancement of: • Woodlands, gardens, open spaces, fields and hedgerows. • Coastal habitats, river catchments, lakes, streams, ponds. • Aquatic, marginal and bank side habitats. • Parks, playing fields and recreational areas. • Upstream of mapped flood zones. • City transport routes. **Objective 6.23 Designated Sites and Protected Species** To protect and enhance designated sites and areas of natural heritage and biodiversity and the habitats, flora and fauna for which it is designated, and to protect, enhance and conserve designated species. **Objective 6.24 Information to be considered for development affecting designated sites** To ensure that development proposals affecting designated sites have regard to the sensitivities identified in the SEA Environmental Report prepared in respect of this Plan.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		Objective 6.25 Non-designated Areas of Biodiversity Importance Cork City Council will seek to map the City's ecological networks and corridors of local biodiversity value outside of designated areas, and to work with local stakeholders in supporting the effective management of features which are important for wild flora and fauna and habitats. **Objective 6.26 Alien Invasive Species** To support the implementation of measures to control and prevent the introduction, establishment or spread of ecologically damaging alien invasive species (e.g. Japanese Knotweed and Himalayan Balsam). **Paragraph 6.62** "As with all Plan provisions, Objectives in this Section will be implemented subject to compliance with the Habitats and Birds Directives and other ecological protection objectives" **Paragraph No. 6.63** "No plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects)[66]." **Paragraph 6.64** "Any agricultural or fishing/aquaculture activities related developments or would be considered subject to compliance with the Habitats and Birds Directives and in consultation with Inland Fisheries Ireland as relevant". **Objective 9.19 External Lighting** To require that external lighting proposals minimise the harmful effects of light pollution, are energy efficient, and do not have an excessive impact on residential or visual amenity, biodiversity or result in the distraction of road users.
Population and human health	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	Also refer to measures under other environmental components including Soil, Water and Air and Climatic Factors. **Objective 9.18 Air Quality** (a) To protect and improve air quality in Cork City in accordance with the provisions of EU Directives and national legislation on air pollution and support the actions of the City Council's Air Quality Strategy 2021-2026, and its successors. (b) To continue to monitor air quality results submitted from selected locations throughout the City in co-operation with the Environmental Protection Agency and support the creation of a regional air quality and greenhouse gas emissions inventory. **Objective 9.20 Noise** To support the implementation of the objectives of The Cork Agglomeration Noise Action Plan 2018 – 2023 and promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life. **Objective 9.21 Seveso** (a) Assessment of Development in Vicinity of Seveso III Sites: Land use proposals for development within the vicinity of sites identified under the Control of Major Accident Hazards Directive and any regulations, under any enactment, giving effect to that Directive, will be assessed having regard to technical guidance provided by the Health and Safety Authority. (b) Relocation of Seveso III Sites: Cork City Council will actively seek the relocation of Seveso III facilities / activities to suitable alternative sites outside the City
Soil	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank and coastal erosion.	Also refer to measures under other environmental components including Water. **Objective 6.7 Carbon Sequestration** To work with landowners, communities and other stakeholders in supporting initiatives to increase carbon sequestration through the effective and sustainable use of undeveloped, vacant and agricultural land. This could include opportunities to explore protecting soil fertility, reducing erosion, increasing soil organic matter, re-wetting bogs and peatland and restoring degraded soils. **Objective 6.27 Areas of Geological Importance** To seek the conservation of important features of geological interest in Cork City. Objective Chapter 7 Quarries and Aggregate Resources: To recognise the important role the mineral extraction and aggregate industry can play by protecting any reserves of aggregates and minerals from development that might impact on their utilisation. Extractions that would result in a reduction of the visual amenity of areas of high amenity or damage to areas of scientific importance or of geological, botanical, zoological and other natural significance including all designated European Sites or have a detrimental impact on residential amenity will not be permitted. The Planning Authority will have regard to the Guidelines for Planning Authorities for Quarries and Ancillary Activities (DoEHLG, 2004) when assessing applications relating to the extraction industry.
Water	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology.	Also refer to measures under other environmental components including Soil and Material Assets. Chapter 4 paragraph 4.9 The capacity and efficiency of the national road network drainage regimes in Cork City will be safeguarded. **Objective 6.6 Rivers, Waterway and Wetlands** (a) To protect and maintain the integrity, and maximise the potential, of the natural heritage and biodiversity value of rivers, associated watercourses and wetlands in Cork City, and to (b) To promote an integrated approach to optimising opportunities associated with rivers, waterways and wetlands generate biodiversity, recreation, tourism, and economic benefits. **Chapter 9 paragraph "Coastal Change"** A National Coastal Change Management Strategy Steering Group was set up in 2020 to scope out an approach for the development of a national coordinated and integrated strategy to manage the projected impact of coastal change to our coastal communities, economies, heritage, culture and environment. Cork City Council supports the preparation of the strategy and will consider its findings when published and how it may impact its functional area. In the interim consideration will be given to areas that may be at risk or vulnerable to coastal erosion or coastal change, including change associated with climate change.

[66] Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be: a) no alternative solution available, b) imperative reasons of overriding public interest for the project to proceed; and c) Adequate compensatory measures in place.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
	• Increase in flood risk and associated effects associated with flood events.	**Objective 9.4 SUDS** (a) To require that all planning applications for new development incorporate Sustainable Urban Drainage Systems (SUDS) in so far as possible. Such proposals shall be accompanied by a comprehensive SUDS assessment including run-off quantity, run off quality and impacts on habitat and water quality. (b) To encourage the provision of green roofs and green walls as an integrated part of Sustainable Urban Drainage Systems (SUDS) and which provide benefits for biodiversity, wherever feasible. (c) To investigate the feasibility of preparing Sustainable Urban Drainage Systems (SUDS) guidelines for Cork City during the lifetime of the plan. In the interim The Department of Housing, Local Government and Heritage document: Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas Water Sensitive Urban Design - Best Practice Interim Guidance Document, will provide guidance in this regard.. **Objective 9.5 Discharging** (a) To ensure that onsite petrol/oil interceptors and silt traps shall be installed to all significant road projects/upgrades or for proposals where surface water otherwise discharges to watercourses, to prevent hydrocarbon pollution of the receiving waters. (b) To ensure that developments permitted by the Council which involve discharge of wastewater to surface waters or groundwaters, comply with the requirements of the EU Environmental Objectives (Surface Waters) Regulations and EU Environmental Objectives (Groundwater) Regulations. **Objective 9.6 Storm Water** To provide adequate storm water infrastructure in order to accommodate the planned levels of growth within the plan area and to ensure that appropriate flood management measures are implemented to protect property and infrastructure. **Objective 9.7 Water Quality** (a) To ensure the delivery of the relevant policies and objectives of The River Basin Management Plan for Ireland 2018 – 2021 and any subsequent plan, including those relating to protection of water status, improvement of water status, prevention of deterioration and meeting objectives for designated protected sites. (b) To support Irish Water in its implementation of Water Quality Management Plans for ground, surface, coastal and estuarine waters as part of the implementation of the EU Water Framework Directive and in the development of Drinking Water Protection Plans. (c) To support the provision of mitigation and protection measures for all protected areas, including Drinking Water Protected Areas and associated Source Protection Plans in line with the Water Framework Directives and River Basin Management Plans. (d) To have cognisance of, where relevant, the EU's Common Implementation Strategy Guidance Document No. 20 and 36 which provide guidance on exemptions to the environmental objectives of the Water Framework Directive. **Objective 9.8 Flood Protection** To protect, enhance and manage the City's floodplains, wetlands and coastal habitat areas that are subject to flooding as vital 'green infrastructure' which provides space for storage and conveyance of floodwater, enabling flood risk to be more effectively managed and reduce the need to provide flood defence infrastructures. Cork Council will also require that all proposed flood protection or alleviation works will be subject to Appropriate Assessment to ensure there are no likely significant effects on the integrity, defined by the structure and function, of any European Sites and that the requirements of Article 6 of the EU Habitats Directive are met. **Objective 9.9 Flood Protection Schemes** To work with the Office of Public Works (OPW) in the progression and completion of Flood Risk Management Plans and flood relief schemes including the Lower Lee Flood Relief Scheme (LLFRS), schemes in Blackpool, Glanmire / Glashaboy, Douglas / Togher and other schemes that may be developed during the period of the plan. **Objective 9.10 Development in Flood Risk Areas** (a) To restrict development in identified flood risk areas, in particular flood plains. All new development proposals shall comply with the requirements of the Planning System and Flood Risk Management –Guidelines for Planning Authorities (2009) and Department of Environment, Community and Local Government Circular PL2/2014, in particular through the application of the sequential approach and the Development Management Justification Test. (b) All significant proposals for development identified as being vulnerable to flooding will be required to provide a site specific Flood Risk Assessment to identify potential loss of floodplain storage and proposals for the storage or attenuation (e.g. SUDS) of run-off discharges (including foul drains) to ensure development does not increase the flood risk in the relevant catchment. (c) Adopt a river catchment approach to rivers entering the City, practicing natural flood management wherever practical and appropriate. **Chapter 10 paragraph 10.110** The Strategy provides the following (see Map D, Volume 2: Mapped Objectives "Summary of Proposed Infrastructure Measures in the South Docks Drainage and Levels Strategy"): • An infrastructure strategy to ensure that the South Docks is resilient to flood risk and climate change; • Drainage catchments that provide for the capacity of the network to deal with pluvial (rainfall) runoff; • A surface water drainage network based upon SuDS / nature-based solutions, storage and conveyance solutions, including conveyance by grey infrastructure (see Figure 10.10a); • A perimeter flood protection from tidal and fluvial (river) flood risks, in accordance with the Drainage and Flood Strategy, including a transition from the standard perimeter defence of 4.35m OD at the proposed Kent Station Bridge to the proposed Flood protection levels at Albert Quay. • Minimum ground (public realm and streets) level and building finished floor levels (FFLs) with proposed ground levels as close to existing ground levels as possible, while mitigating against pluvial (cloudburst) flood risk. • Public strategic (regional) flood storage will need to be provided across a number of locations in the South Docks, as set out above. • Site acquisition is likely to be required to deliver elements of this green storage infrastructure, which are in private ownership. A key location for the preferred additional storage location will be identified. • The proposed public open space to the south of the Atlantic Pond and within the Ardfoyle Convent lands, which would form part of the Marina Park.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		The Strategy indicates that there may be a requirement for a surface water pumping station in the vicinity of the proposed extension to the Atlantic Pond area to meet the challenge presented by climate change, with a site of a total c.250sqm being required to accommodate this infrastructure. The Strategy identifies possible locations for this facility on the proposed extension to the Atlantic Pond area. The suitability of these, or other, locations for the pumping station will need to be identified during the life of the Plan. **Chapter 10 paragraph 10.112** It is necessary to marginally increase localised ground (public realm and roads) levels at low points to between 0.85m OD and 1.0m OD to facilitate an effective gravity system and achievable storage volumes for scenarios up to Medium Risk Future Scenario (MRFS) . **Chapter 10 paragraph 10.113** To ensure that proposed buildings are at acceptably low levels of risk of surface water flooding, it is proposed to set minimum finished floor levels (FFL) at least 300mmabove the predicted 1 in 100 year (=+40% climate change) pluvial flood level and the residual inundation risk, which varies across the docks, as shown above **Chapter 10 paragraph 10.114** It is recommended that this minimum level apply only to Water Compatible Development and Less Vulnerable Development as defined by the Flood Risk Planning Guidelines[3], and subject to site specific flood risk assessment demonstrating appropriate flood mitigation strategy. Within the polder, finished floor levels for less vulnerable uses do not strictly need to be above the residual risk level but will need defences up to that level through building flood resilience measures. Planning applications for development will demonstrate compliance with the provisions of the Guidelines by means of Site Specific Flood Risk Assessment. **Chapter 10 paragraph 10.115** Within the defended polder, a general minimum FFL for Highly Vulnerable Development shall be +1.9mOD to mitigate the residual risk of breach of the polder defence based on 1 in 200 year tidal flood level, including appropriate allowances for climate change, residual risk (breach and overtopping) and freeboard. It is envisaged that minimum FFL along the quayside would be set at or above the proposed polder defence level of +3.8m to +4.35m OD, except for the western transition from Albert Quay where a minimum FFL of +3.8m OD can be accommodated due to constraints imposed by existing streetscapes. *objective relating to Hop Island:* **Chapter 11 paragraph 11.260** Land use zoning objectives provided by this Plan are subject to the following conditions: (1) Undeveloped land in Flood Zone A that is the subject of any zoning objective are only zoned for and shall only be developed for water compatible uses as identified in the Guidelines. (2) Undeveloped land in Flood Zone B that is the subject of any zoning objective are only zoned for and shall only be developed for water compatible or less vulnerable uses as identified in the Guidelines. (3) With respect to lands that have already been developed in Flood Zone A or B the potential conflict (between zoning and highly or less vulnerable development in Flood Zone A and between zoning and highly vulnerable development in Flood Zone B) will be avoided by applying the following zoning approach, subject to the exception areas set out in (iii) below: (i) Cork City Council will facilitate the appropriate management and sustainable use of these areas. This will mean generally limiting new development, but facilitating existing development uses that may require small scale development such as small extensions. Development proposals within these areas shall be accompanied by a detailed Flood Risk Assessment, carried out in accordance with The Planning System and Flood Risk Assessment Guidelines and Circular PL 2/2014 (or as updated), which shall assess the risks of flooding associated with the proposed development. Where development proposals submitted to the Planning Authority relate to existing buildings or developed areas, the sequential approach cannot be used to locate them in lower-risk areas and the Justification Test will not therefore apply. Proposals seeking to change the use of existing buildings from a less vulnerable use to a use that would be more vulnerable to the effects of flooding may not be permissible in areas of elevated flood risk, whilst some change of use proposals not increasing the vulnerability to the effects of flooding or small scale extensions to such buildings will be considered on their individual merits but are acceptable in principle. An existing dwelling or building that is not located within an area at risk of flooding but has a large rear garden / curtilage that is located within Flood Zone A or B would not be suitable for a more in-depth residential development proposal which would propose a residential use within Flood Zone A or B. (ii) Proposals shall only be considered favourably where it is demonstrated to the satisfaction of the Planning Authority that they would not have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities, or increase the risk of flooding to other locations and be in accordance with the proper planning and sustainable development of the area. The nature and design of structural and non-structural flood risk management measures required for development in such areas (see relevant Flood Risk Assessments - section below) will also be required to be demonstrated, to ensure that flood hazard and risk will not be increased. Measures proposed shall follow best practice in the management of health and safety for users and residents of the development. (iii) Exceptional areas are the already developed City Centre and Docklands areas, which have undergone Justification Tests and have been zoned for development, and established built-up areas of Cork City including suburban areas such as Model Farm Road / Carrigrohane Road area and Douglas. Future development in these areas will: • be subject to site-specific flood risk assessments; • comply with the flood risk management provisions of this Plan, including the structural and non-structural risk management measures outlined under Flood Risk Assessments below, and relevant measures contained in the Council's 2020 South Docks Drainage Strategy; and • will benefit from Flood Relief Schemes being progressed by the OPW. Flood hazard and flood risk information is an emerging dataset of information. The flood risk mapping used by the Council may be altered in light of future data and analysis. Therefore, all landowners and developers are advised that Cork City Council accept no responsibility for losses or damages arising due to assessments of vulnerability to flooding of lands, uses and developments. Owners, users and developers are advised to take all reasonable measures to assess the vulnerability to flooding in a particular area, prior to submitting a planning application. **Chapter 11 after paragraph 12.7** Further to Plan provisions relating to flood risk management under other parts of this Plan (including Paragraph No's. 11.256 to 11.263 and Paragraph No's. 12.20 to 12.22 (* subject to final numeration in final Plan), Permissible Uses within Flood Zones A or B in areas that have not passed the Justification Test (i.e. those areas outside of Cork City Centre and the North and South Docklands shall be constrained to those "water compatible" and "less vulnerable" uses as appropriate to the particular Flood Zone (please refer to the accompanying Strategic Flood Risk Assessment document).

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
Air and Climatic Factors	• Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management.	Also refer to Plan's various sustainable transport provisions and detailed measures for Climate Action to Chapter 5 "Climate Change and the Environment". **Objective 6.7 Carbon Sequestration** To work with landowners, communities and other stakeholders in supporting initiatives to increase carbon sequestration through the effective and sustainable use of undeveloped, vacant and agricultural land. This could include opportunities to explore protecting soil fertility, reducing erosion, increasing soil organic matter, re-wetting bogs and peatland and restoring degraded soils. **Objective 9.18 Air Quality** (a) To protect and improve air quality in Cork City in accordance with the provisions of EU Directives and national legislation on air pollution and support the actions of the City Council's Air Quality Strategy 2021-2026, and its successors. (b) To continue to monitor air quality results submitted from selected locations throughout the City in co-operation with the Environmental Protection Agency and support the creation of a regional air quality and greenhouse gas emissions inventory. **Objective 9.20 Noise** To support the implementation of the objectives of The Cork Agglomeration Noise Action Plan 2018 – 2023 and promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life.
Material Assets	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure.	Also refer to measures under other environmental components including Population and Human Health, Cultural Heritage, Soil, Water, Air, various Land Use and Phasing provisions. **Environmental Infrastructure Development Objectives** **Strategic Objective 8: Environmental Infrastructure** **Objective 9.1 Irish Water** (a) To work with Irish Water to ensure the efficient and sustainable use and development of water resources and water services infrastructure in the City. (b) To work with Irish Water to identify and facilitate the timely delivery of water and wastewater projects in order to facilitate development in accordance with the Core Strategy. (c) To work with Irish Water in promoting water conservation and demand management measures among users and support the implementation of measures such as leakage reduction and network improvements. (d) To support Irish Water in the development and implementation of the National Water Resources Plan and Drinking Water Safety Plans. (e) To support Irish Water in the promotion of effective management of trade discharges to sewers in order to maximise the capacity of existing sewer networks and minimise detrimental impacts on sewage treatment works. **Objective 9.2 Waste Water** (a) To require all new proposals for development to provide a separate foul and surface water drainage system and to incorporate Sustainable Urban Drainage Systems in so far as practical. (b) As part of new proposals for development, evidence of consultation with Irish Water should be submitted as part of a planning application, demonstrating that adequate water services are available to service the development and that existing water services will not be negatively impacted. **Objective 9.3 Group Water Schemes, Private Wells and Individual Treatment Systems** (a) To require that all developments where public watermains are available or likely to be available and have sufficient capacity, shall connect to them. (b) To ensure that all new developments connect to the public wastewater infrastructure, where available, and to encourage existing developments that are in close proximity to a public sewer to connect to that sewer, subject to a connection agreement with Irish Water. (c) To discourage the provision of single house septic tanks and treatment plants to minimise the risk of groundwater pollution in line with the rural housing policy of this Plan. Where such facilities are permitted, full compliance with the prevailing regulations and standards, including the EPA's Code of Practice Wastewater Treatment and Disposal Systems Serving Single Houses (PE. ≤10) (EPA 2009), and its replacement the EPA Code of Practice for Domestic Wastewater Treatment Systems (Population Equivalent ≤ 10) (2021), will be required. (d) Residential development that requires the provision of private wastewater treatment facilities (i.e. Developer Provided Infrastructure), other than single house systems will generally not be permitted. (e) To ensure that private wastewater treatment facilities, where permitted, are operated in compliance with their wastewater discharge license, in order to protect water quality. **Objective 9.12 Waste Management** (a) To support the sustainable management of waste in line with the objectives of the Southern Region Waste Management Plan 2015-2021 and the National Waste Management Plan for a Circular Economy (NWMPCE) when published, which will replace the existing Regional Waste Management Plans. (b) To facilitate the transition to a circular economy facilitating the value recovery and recirculation of resources in order to generate minimal waste.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
	• Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.	(c) Continue to fulfil duties under the Waste Management (certification of historic unlicensed waste disposal and recovery activity) Regulations 2008 (S.I. No 524 of 2008), including those in relation to the identification and registration of closed landfills. (d) To encourage the recycling of construction and demolition waste and the reuse of aggregate and other materials in future construction projects. Applications for large infrastructure projects shall be accompanied by a Construction and Environmental Management Plan that includes details of how construction and demolition waste generated is to be managed and, where reuse/recycling is not practicable, disposed of, in line with legislative requirements. **Objective 9.14 Undergrounding of Cables** The Council will encourage the undergrounding of cables and associated equipment where feasible and generally require such services be located underground as part of new developments. It is acknowledged that this may not always be possible for high voltage transmission infrastructure. Proposals should demonstrate that environmental impacts including the following are minimised: • Habitat loss as a result of removal of field boundaries and hedgerows (right of way preparation) followed by topsoil stripping (to ensure machinery does not destroy soil structure and drainage properties); • Short to medium term impacts on the landscape where, for example, hedgerows are encountered; • Impacts on underground archaeology; • Impacts on soil structure and drainage; and • Impacts on surface waters as a result of sedimentation. 9.14 To promote the increased use of renewable energy resources in Cork City such as solar, small or microscale wind, geothermal, heat pumps and district heating. To engage with the proposed revision of the SEAI's Methodology for Local Authority Renewable Energy Strategies (LARES), to provide a best practice approach to identifying and assessing renewable energy resources in spatial planning at local authority level. Following this process a LARES for the City with specific targets on renewable energy will be prepared. To encourage small-scale wind energy developments and support small community-based proposals provided they do not negatively impact upon the environmental quality or amenity of the area.
Cultural Heritage	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities	**Strategic Objective 7: Heritage, Arts and Culture** To protect and reinforce the unique character and built fabric of the city, towns, villages, suburbs, neighbourhoods and places that make up the fabric of Cork City, both the character derived from the natural environment and the man-made character created by the built form. This will be achieved by protecting Protected Structures, archaeological monuments, and archaeological heritage and Architectural Conservation Areas, while providing opportunities for new development that respects the rich and historic built heritage of the City. To identify, protect, enhance and promote Cork's unique cultural heritage and expression in an authentic and meaningful way. To foster and support the arts and culture in Cork City by encouraging new and improved facilities and by ensuring that arts and culture infrastructure are integrated into large-scale developments on key sites. To support the development of a vibrant cultural and creative sector in the City as a key enabler of innovation, placemaking and community development throughout the City. To support the role of Cork City as a significant domestic and international tourism destination and support the sustainable use and development of the City's tourism assets. To ensure that elements of archaeological, architectural and cultural heritage significance are identified, retained and interpreted wherever possible and the knowledge placed in the public domain. Proposals for new development must have regard to the historic built heritage of the City, particularly Protected Structures, archaeological monuments and heritage and Architectural Conservation Areas, and any development that has a detrimental impact on these assets will not normally be acceptable. **Objective 8.1 Strategic Archaeology Objective** (a) To protect and preserve archaeological monuments as listed in the Sites and Monuments Record (SMR), Record of Monuments and Places (RMP) and the Wreak Inventory of Ireland Database (WIID). All sites can be accessed on the Historic Environment Viewer (www.archaeology.ie). The National Monuments Service will be informed of all development proposals which relate to Sites and Zones of Archaeological Interest. (b) Cork City Council will have regard to the relevant national statutory policies and guidelines, including Frameworks and Principles for the Protection of the Archaeological Heritage and to Best Practice Guidance documents published by the Heritage Council and the Institute of Archaeologists of Ireland. (c) To preserve the character and setting of the medieval city wall and defences, which is a National Monument, according to the recommendations of the Cork City Walls Management Plan (2007) and the National Policy on Town Defences (2008). (d) To promote the retention, reuse, and enhancement of buildings and other elements of architectural, archaeological and other significance. (e) To ensure that development reflects and is sensitive to the historical importance and character of the city and its hinterland, in particular the street layout and pattern, plot sizes, building heights and scales. (f) To improve and encourage access to and understanding of the architectural and archaeological heritage of the City. **Objective 8.2 Protection of the Archaeological Resource** (a) Cork City Council will protect and enhance the archaeological value of the sites (and their settings) listed in the Record of Monuments and Places (RMP) and the Historic Environment Viewer. (b) Cork City Council will ensure that development proposals will protect and preserve archaeological sites discovered since the publication of the Record of Monuments and Places (RMP). (c) To ensure the preservation of archaeological remains in-situ, in accordance with national policy (and in the interests of sustainability) impacts on the buried archaeological environment should be avoided where possible. **Objective 8.3 The Value of Archaeological Knowledge** To require that all appropriate archaeological excavation should be undertaken to the highest possible standards and the information made publicly available. The acquisition and dissemination of knowledge is a core principle for the protection of the archaeological heritage of the city. Cork City Council will endeavour to ensure public dissemination through publications and public lectures.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		Objective 8.4 Protection of the Medieval Historic Core (a) Where development is proposed within the medieval historic core a policy of minimising the impact on the archaeological resource will be promoted. Any proposed development will be assessed on the level and amount of undisturbed archaeology present on the site. (b) Cork City Council/ will seek to protect Cork's medieval street pattern, and in particular, seek to conserve and enhance the laneways within the setting of the streetscape. (c) Development proposals will seek to retain historic building lines and traditional plot widths where they derive from medieval origins. The physical integrity of the medieval core should be respected through the retention of plot sizes which can be achieved by the refurbishment of existing buildings. **Objective 8.5 Protection of Cork's Medieval City Wall and Defences** (a) Cork City Council will ensure preservation in-situ of the Medieval City Wall and Defences and will have regard to the preservation and enhancement of the line of the City Wall when considering development proposals in its vicinity. Disturbance, removal and alteration of the line of the City Wall will not be permitted. An appropriate buffer zone between the City Wall and the development will also be required. (b) Cork City Council will seek to improve public awareness and increase knowledge and appreciation of the medieval city walls. **Objective 8.6 Protection of burial Grounds** Cork City Council will seek to preserve and enhance burial grounds and their settings. Development in and adjacent to these areas will be limited. Where former burial grounds are in use as amenity spaces then their retention for passive recreational use will be required. **Objective 8.7 Industrial Archaeology** Cork City Council requires that all development proposals for industrial buildings and sites of industrial archaeological importance be accompanied by an archaeological assessment of the building(s) and their surrounding environment. Retention and/or incorporation of industrial buildings will be encouraged. Where in exceptional circumstances demolition is permitted, a detailed building report will be required. **Objective 8.8 Underwater Archaeology** Cork City Council requires that all development proposals which will impact on marine, riverine, lacustrine, intertidal/sub-tidal environments, and areas of former reclaimed land, shall be subject to appropriate archaeological assessment. **Objective 8.9 Preservation of archaeology within open space in developments** In development proposals where archaeological remains is to be retained in-situ the archaeology will be protected, safeguarded and, where suitable, be interpreted in an accessible manner. Where the archaeology being preserved in located in open space, then this will be in addition to the overall open space provisions. **Objective 8.10 Archaeological Management Strategy for the City** (a) Cork City Council will seek to prepare and implement conservation and management plans for National Monuments and Recorded Monuments in Cork City Council Ownership. (b) Cork City Council will seek to develop an archaeological strategy for the city, to include management and protection of strategic research locations. (c) Cork City Council will seek to develop an archaeological GIS for archaeological investigations undertaken in the city. (d) Cork City Council will seek to ensure that the tourism strategy within medieval historic core and in area/setting of historic monuments should draw on its archaeological heritage and should reflect a strong and authentic sense of place. **Objective 8.11 Strategic Arts and Culture Objective** (a) To celebrate Cork as a city of culture and to support the further development of Cork as a centre for arts, culture and creativity. (b) To grow Cork's cultural capacity by retaining and attracting creative practitioners to live and work in Cork. (c) To support the continued advancement, participation and collaboration of arts and cultural services through the implementation of the forthcoming Cork City Arts Strategy (2021 – 2025). (d) To creatively engage citizens in shaping Cork's cultural identity through implementation of the Creative Cork Strategy 2018 – 2022 and its successors. (e) To protect and enhance the cultural amenities of the city including the conservation, protection and enhancement of Cork City's natural, built and cultural heritage. (f) To ensure the preservation and promotion of the cultural identity of Cork's urban and rural city neighbourhoods. **Objective 8.12 Cork as a City of Culture** To celebrate Cork as a city of culture and to support the further development of Cork as a centre for arts, culture and creativity; Cork City Council will aim to further expand and improve on the provision of such facilities and consider cultural provision in development management. **Objective 8.13 Cork's Cultural Capacity** To grow Cork's cultural capacity by retaining and attracting creative practitioners to live and work in Cork. To this end Cork City Council will seek to: (a) Ensure that cultural facilities are not lost from existing buildings in redevelopment proposals i.e. where the redevelopment of sites/buildings which include an existing cultural facility is proposed that this facility is replicated/re-housed in the new development. (b) Support the development of vacant premises and sites in the City Centre for arts and cultural uses. (c) Support the development of infrastructure for artists including spaces for artists to live, work and exhibit. (d) Ensure the retention and facilitation of artistic/design based educational institutions in the City, recognising the role of third level education institutions, including UCC and MTU, in the promotion and development of arts and culture in the City. **Objective 8.14 Cork City Arts Strategy** To support the continued advancement, participation and collaboration of arts and cultural services through the implementation of the Cork City Arts & Culture Strategy 2022 - 2026. **Objective 8.15 Creative Cork Strategy** To creatively engage citizens in shaping Cork's cultural identity through implementation of the Creative Cork Strategy 2018 – 2022 Cork City Council will seek to: (a) Invest in long term engagement in creative collaboration. (b) Recognise youth culture as a creative force and an art form for Cork City. (c) Creatively engage our citizens in Archaeology, built, natural and cultural heritage.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		(d) Creatively use our public space for our communities through one large scale cultural public event each year. (e) Recognise Cork City as an intercultural city. (f) Recognise the contribution of Cork creatives to Cork's identity as a city of culture. **Objective 8.16 Arts and the Public Realm** To ensure that the nurturing of the arts and associated services is part of the planned development of Cork City and its urban and rural neighbourhoods, in line with the 15 minute city concept and to enhance the cultural use of public realm spaces, Cork City Council will: (a) Stimulate cultural activity in Cork's public spaces including greater use of empty premises and outdoor spaces. (b) Prioritise high-quality, design-led approaches to public realm enhancement. (c) Provide for cultural and family uses in planning of public realm development projects. (d) Observe principles of placemaking in public realm development projects. (e) Implement the Arts Strategy for Cork Docklands Public Realm as part of the Docklands Development (f) Protect and enhance built heritage through development for cultural uses where necessary, appropriate and feasible. (g) Continue to promote and encourage the provision of public art in large scale developments, in public parks and other public spaces. (h) Ensure that all construction projects undertaken by Cork City Council which are supported by Government funding are considered for the 'Per cent for Art' Scheme. (i) Ensure a good distribution of artistic and creative spaces and events across the walkable neighbourhoods areas identified in Chapter 2. **Objective 8.17 Conservation of the City's Built Heritage** (a) To seek to ensure the conservation of Cork City's built heritage. (b) To ensure that Cork's Built Heritage contributes fully to the social and economic life of the city and to pursue actions that ensure Cork's built heritage will benefit from good custodianship and building occupation. **Objective 8.18 Reuse and Refurbishment Historic Buildings** (a) The City Council will actively encourage the re-use of historic buildings in the interests of conservation and environmental sustainability to minimise waste and optimise on the embodied energy in existing buildings. (b) Uses which will have a minimal impact on the character of historic structures will be encouraged. (c) Alterations will adhere to best practice conservation standards. (d) The reinstatement of lost features and removal of unsympathetic additions will be encouraged where appropriate. (e) It is recognised that the protection and retention of historic buildings within the medieval city, has the dual advantage of protecting the rich archaeological resource and the Recorded Monument of the City Wall. **Objective 8.19 Record of Protected Structures** To maintain a Record of Protected Structures (RPS) which shall include structures or parts of structures which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, and which it is an objective to protect. (a) Any changes or alterations to the character of a Protected Structure which would in the opinion of Cork City Council, have a material effect on the character of the structure, will require planning permission. (b) Cork City Council will have regard to the relevant statutory guidance issue by the central government department responsible for the built heritage, including the Architectural heritage protection, guidelines for planning authorities. (c) Proposals for demolition of a Protected Structure shall not be permitted except in exceptional circumstances and where it can be shown that a greater public interest will be served which outweighs the loss to the architectural heritage. (d) Any alteration or demolition of a Protected Structure shall require the preparation of a full drawn and photographic record to Best Conservation Practice. (e) A broad range of uses will be considered for the regeneration / reuse of protected structures that are derelict / unederutilised. (f) Where the planning authority accepts the principle of demolition a detailed written and photographic inventory of the building will be made and sent to the Cork City and County Archives and the Irish Architectural Archive for record purposes. (g) Where a planning application is being granted for development within the curtilage of a Protected Structure, the conservation of the protected structure will be prioritised as the first phase of the development to prevent endangerment, abandonment and dereliction. **Objective 8.20 Historic Landscapes** Cork City Council will ensure that the designated and undesignated historic landscapes and gardens throughout the city are protected from inappropriate development and enhanced where possible. **Objective 8.21 Enabling Development** To allow for the enabling of development Cork City Council will consider permitting the following, notwithstanding the zoning objectives of the area: (a) The restoration of a Protected Structure, or other buildings of architectural or other merit, currently in poor condition, to conservation best practice for any purpose compatible with the character of the building. (b) The conservation of a Protected Structure or other building of architectural or other merit, independently of its current condition for a range of potential uses such as tourism, social, cultural amenity as a priority, or housing and business uses as a secondary potential use, in cases where, in Cork City Council's opinion, that the converted building is capable of functioning as an important additional tourist attraction or facility, and the use is compatible with the character of the building (c) Cork City Council will promote by whatever means it considers most appropriate the temporary or short-term use, in particular arts, community or tourist uses, of vacant or underused structures or sites of built heritage interest for any use which is compatible with the character of the structure or site.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		Objective 8.22 National Inventory of Architectural Heritage (NIAH) Cork City Council will have regard to Ministerial recommendations to the City Council to consider the designation of the buildings and gardens listed in the National Inventory of Architectural Heritage as Protected Structures. Cork City Council will consider the structures listed in the NIAH for protection, by designation of Protected Structures, by the adoption of Architectural Conservation Areas to protect groups of buildings, or by whatever other means the Council considers will most effectively protect the architectural heritage of the City. These Ministerial Recommendations will be taken into account when the Cork City Council is considering proposals for development that would affect the historic or architectural interest of these structures. Cork City Council will seek to engage with key stakeholder groups, including public representatives, building owners and the public to develop the most appropriate response for the protection of specific buildings, groups of buildings and historic areas. **Objective 8.23 Development in Architectural Conservation Areas** Development in Architectural Conservation Areas should have regard to the following: (a) Works that impact negatively upon features within the public realm, such as stone setts, cobbles or other historic paving, railings, street furniture, stone kerbing etc. shall not be generally permitted. (b) Design and detailing that responds respectfully to the historic environment in a way that contributes new values from our own time. This can be achieved by considering layout, scale, materials and finishes and patterns such as plot divisions in the surrounding area. (c) Historic materials and methods of construction should be retained and repaired where this is reasonable, e.g. historic windows and doors, original roof coverings, metal rainwater goods should be retained along with original forms and locations of openings etc. (d) Repairs or the addition of new materials should be appropriate and in keeping with the character of the original structures. **Objective 8.24 Demolition in Architectural Conservation Areas** Demolition of structures and parts of structures will in principle only be permitted in an Architectural Conservation Area where the structure, or parts of a structure, are considered not to contribute to the special or distinctive character, or where the replacement structure would significantly enhance the special character more than the retention of the original structure. **Objective 8.25 Recording of Structures in Architectural Conservation Areas** Where in exceptional circumstances a structure or a part of a structure which is considered to contribute to the special character of the area, is permitted to be demolished, it should first be recorded in drawn and photographic form prior to demolition, and where appropriate should be monitored during demolition. The building record should be lodged with the Cork City & County Archives and with the Irish Architectural Archive in addition to the requirements of planning permission conditions. **Objective 8.26 Individual buildings of character in suburban areas and villages** There will be a presumption against the demolition of such structures of vernacular or historic / social interest which contribute to the character and identity of an area. Their re-use will be prioritised. **Objective 8.27 Elements of Built Heritage** Cork City Council will ensure the protection of important elements of the built heritage and their settings as appropriate. **Objective 8.28 Separate access to the Upper Floors of Buildings** In order to ensure the continued use of uppers floors above ground floor commercial uses, there will be a presumption against the loss of access to the upper floors of buildings from street frontages, Cork City Council will seek the reinstatement of upper floor access points wherever possible from the street. **Objective 8.29 Historic Town Centre Supports** To advance the provision of collaborative supports for Historic Town Centres in Cork City, including the Collaborative Town Centre Health Check (CTCHC) Programme recently established by the Heritage Council.
Landscape	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	**Objective 6.9 Landscape** (a) To preserve and enhance Cork's landscape character, key landscape assets and views and prospects of special amenity value. (b) Landscape will be an important factor in all development proposals, ensuring that a proactive view of development is undertaken while maintaining respect for the environment and heritage generally in line with the principle of sustainability. (c) To ensure that new development meets the highest standards of placemaking, siting and design. (d) To protect those prominent open hilltops, valley sides and ridges that define the character of the Cork City Hinterland and those areas which form strategic, largely undeveloped gaps between the main Hinterland settlements from development. (e) To discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments. (f) To support, as appropriate, any relevant recommendations contained in the National Landscape Strategy for Ireland 2015-2025. **Objective 6.10 City Landscape Strategy** Cork City Council will undertake a City Landscape Strategy during the life of this Plan to ensure that the management of development throughout the City will have regard for the value of the landscape, its character, distinctiveness and sensitivity. **Objective 6.11 Landscape and Development** To ensure that the management of development throughout Cork City will have regard for the value of the landscape, its character, distinctiveness and sensitivity in order to minimize the visual and environmental impact of development, particularly in designated areas of high landscape value where higher development standards (layout, design, landscaping, materials) are required. **Objective 6.12 Landscape Preservation Zones** To preserve and enhance the character and visual amenity of Landscape Preservation Zones through the careful management of development. Development will be considered only where it safeguards the value and sensitivity of the particular landscape and achieves the respective site-specific objectives, as set out in Tables 6.6-6.10. **Objective 6.13 Areas of High Landscape Value** To conserve and enhance the character and visual amenity of Areas of High Landscape Value (AHLV) through the appropriate management of development, in order to retain the existing characteristics of the landscape, and its primary landscape assets. Development will be considered only where it safeguards to the value and sensitivity of the particular landscape. There will

Topic	Potentially Significant Adverse Effect, if Unmitigated	Recommendations integrated into the Plan, included in:
		be a presumption against development where it causes significant harm or injury to the intrinsic character of the Area of High Landscape Value and its primary landscape assets, the visual amenity of the landscape; protected views; breaks the existing ridge silhouette; the character and setting of buildings, structures and landmarks; and the ecological and habitat value of the landscape. **Objective 6.14 Cork City View Management Framework** (a) To protect the strategic panoramic, linear, river prospect or scenic route views identified in this Plan and ensure that development proposals do not have an undue detrimental impact on these views. (b) Development proposals will be assessed against their impact on the designated view if it falls within the foreground, middle ground or background of that view. New development should not harm, and where possible should make a positive contribution to, the characteristics and composition of the designated views and their landmark elements. It should also preserve or enhance viewers' ability to recognise and to appreciate Strategically Important Landmarks in these views. (c) Development proposals that could affect a designated view should be accompanied by an assessment that explains, evaluates and justifies any visual impact on the view affected. The scoping process for determining whether a development proposal is likely to affect a designated view should be completed in consultation with Cork City Council. The assessment should demonstrate that the proposal is consistent with the relevant objectives of this Plan. The assessment should form part of a design statement or townscape and visual impact assessment submitted with a planning application. (d) Development in the foreground and middle ground of a designated view should not be overly intrusive, unsightly or prominent to the detriment of the view. Most designated views are seen in a 120 degree field of view. It is not expected that the view outside of this field of vision should be assessed unless specified by Cork City Council. (e) Strategic and local landmark buildings will need to be considered in the scoping of views to identify the potential impacts of development proposals. **Objective 6.15 Development on Scenic Routes** (a) To protect the character of those views and prospects obtainable from scenic routes identified in this Plan. (b) To require those seeking to carry out development in the environs of a scenic route to demonstrate that there will be no adverse obstruction or degradation of the views towards and from vulnerable landscape features. In such areas, the appropriateness of the design, site layout, and landscaping of the proposed development must be demonstrated along with mitigation measures to prevent significant alterations to the appearance or character of the area. (c) To encourage appropriate landscaping and screen planting of developments along scenic routes which provides guidance in relation to landscaping. **Objective 8.20 Historic Landscapes** Cork City Council will ensure that the designated and undesignated historic landscapes and gardens throughout the city are protected from inappropriate development and enhanced where possible.

Section 10 Monitoring Measures

10.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures which will be used in order to monitor the likely significant effects of implementing the Plan.

Monitoring can both demonstrate the positive effects facilitated by the Plan and can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

The occurrence of significant adverse environmental effects not predicted and mitigated by this assessment, which are directly attributable to the implementation of the Plan, would necessitate consideration of these effects in the context of the Plan and potential remediation action(s) and/or review of part(s) of the Plan.

10.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in Section 5 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. Given the position of the Development Plan in the land use planning hierarchy beneath RSES, the measures identified in the RSES SEAs, including the Southern RSES SEA, have been used – as they are or having been slightly modified – in most instances. This consistency across the hierarchy of land use plans will improve the efficiency and effectiveness of future monitoring.

Table 10.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated.

Monitoring is an ongoing process and the programme allows for flexibility and the further refinement of indicators and targets. The Monitoring Programme may be updated to deal with specific environmental issues – including unforeseen effects – as they arise.

10.3 Sources

The Plan forms part of the wider land use planning framework comprising a hierarchy of policies, plans, programmes, etc. This wider framework, including the National Planning Framework and the Southern RSES, is subject to its own SEA (and associated monitoring) requirements. At lower tiers of the hierarchy, Local Area Plans and individual projects will be subject to their own monitoring requirements as relevant.

In implementing the Monitoring Programme the Council will take into account this hierarchy of planning and environmental monitoring.

Sources for indicators may include existing monitoring databases (including those maintained by planning authorities and national/regional government departments and agencies) and the output of lower-tier environmental assessment and decision making (including a review of project approvals granted and associated documents and the output of any EIA monitoring programmes).

10.4 Reporting

As included in Chapter 2 Core Strategy:

"The Council shall, in conjunction with the Regional Assembly and other sources as relevant, implement the monitoring programme as set out in the SEA Environmental Report and Statement. This will include the preparation of stand-alone SEA Monitoring Reports:

1. To accompany the report required of the manager under section 15(2) of the Act, including information in relation to progress on, and the results of, monitoring the significant environmental effects of implementation of the development plan;
2. On the significant environmental effects of implementing the Plan, in

advance of the beginning of the review of the next Plan."

Reporting will seek to address the indicators set out on Table 10.1. The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports (reports will be made available to the public) and, if necessary, the carrying out of remedial action.

Table 10.1 Indicators, Targets, Sources and Remedial Action

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Biodiversity, Flora and Fauna	BFF	• Condition of European sites	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, the City's Heritage and Biodiversity Plan	• DHLGH report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years) [67] • DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 3 years) [68] • Consultations with the NPWS (see Section 10.4) [69]	• Where condition of European sites is found to be deteriorating this will be investigated with the Regional Assembly and the DHLGH to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.
		• Number of spatial plans that have included ecosystem services content, mapping and policy to protect ecosystem services when their relevant plans are either revised or drafted	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, the City's Heritage and Biodiversity Plan	• Internal review of local land use plans	• Review internal systems
		• SEAs and AAs as relevant for new Council policies, plans, programmes etc.	• Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc.	• Internal monitoring of preparation of local land use plans	• Review internal systems
		• Status of water quality in the City's water bodies	• Included under Water below	• Included under Water below	• Included under Water below
		• Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 6 "Green and Blue Infrastructure Open Space and Biodiversity"	• For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing for the protection of biodiversity and flora and fauna – see Chapter 6 "Green and Blue Infrastructure Open Space and Biodiversity"	• Internal monitoring of likely significant environmental effects of grants of permission[70]	• Review internal systems

[67] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on Natura 2000 sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

[68] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on Natura 2000 sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

[69] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on Natura 2000 sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

[70] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on Natura 2000 sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Population and Human Health	PHH	• Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 4 "Economy and Employment"	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 4 "Economy and Employment" • By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps (Also relevant to Material Assets)	• Internal review of progress on implementing Plan objectives • Consultations with DECC (see Section 10.4)	• Review internal systems • Consultations with DECC
		• Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan	• No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	• Consultations with the Health Service Executive and EPA	• Consultations with the Health Service Executive and EPA
		• Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• CSO data • Monitoring of Cork City Council's Climate Change Adaptation Strategy 2019-2024	• Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
		• Number of spatial plans that include specific green infrastructure mapping	• Require all local level land use plans to include specific green infrastructure mapping	• Internal review of local land use plans	• Review internal systems
Soil (and Land)	S	• Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets)	• Maintain built surface cover nationally to below the EU average of 4% as per the NPF • In accordance with National Policy Objectives of the National Planning Framework, a minimum of 50% of the housing growth targeted in the City is to be delivered within the existing built-up footprint • To map brownfield and infill land parcels across the City	• EPA Geoportal • Compilation of greenfield and brownfield development for the DHLGH • AA/Screening for AA for each application	• Where the proportion of growth on infill and brownfield sites is not keeping pace with the targets set in the NPF and the RSES, the Council will liaise with the Regional Assembly to establish reasons and coordinate actions to address constraints to doing so.
		• Instances where contaminated material generated from brownfield and infill must be disposed of	• Dispose of contaminated material in compliance with EPA guidance and waste management requirements	• Internal review of grants of permission where contaminated material must be disposed of	• Consultations with the EPA and Development Management
		• Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission	• Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission	• Internal monitoring of grants of permission	• Review internal systems

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Water	W	• Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD	• Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' • Implementation of the objectives of the River Basin Management Plan	• EPA Monitoring Programme for WFD compliance [71]	• Where water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the EPA Catchment Unit, the Regional Assembly and, as relevant, Irish Water to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. • Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.
		• Number of incompatible developments permitted within flood risk areas	• Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	• Internal monitoring of likely significant environmental effects of grants of permission	• Where planning applications are being permitted on flood zones, the Council will ensure that such grants are in compliance with the Flood Risk Management Guidelines and include appropriate flood risk mitigation and management measures.
Material Assets	MA	• Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	• All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan • Where individual on-site wastewater treatment systems are proposed, for planning permission to be only granted when applications demonstrate that the outfall from the individual on-site wastewater treatment system will not – in- combination with other septic tanks – contribute towards any surface or ground water body not meeting the objective of good status under the Water Framework Directive • Facilitate, as appropriate, Irish Water in developing water and wastewater infrastructure • See also targets relating to greenfield and brownfield development of land under Soil and broadband under Population and Human Health	• Internal monitoring of likely significant environmental effects of grants of permission Consultations with the Irish Water (see Section 10.4) • DHLGH in conjunction with Local Authorities	• Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Irish Water to achieve the necessary capacity.
		• Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• CSO data • Monitoring of Cork City Council's Climate Change Adaptation Strategy 2019-2024	• Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.

[71] Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Air	A	• Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% • NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring	• Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels • Improvement in Air Quality trends, particularly in relation to transport related emissions of NO_x and particulate matter	• CSO data • Data from the National Travel Survey • EPA Air Quality Monitoring • Consultations with Department of Transport and Department of Environment, Climate and Communications (see Section 10.4)	• Where proportion of population shows increase in private car use above CSO 2016 figures, Council will coordinate with the Regional Assembly, DHLGH, DECC and NTA to develop a tailored response. See also entry under Population and human health above
Climatic Factors [72]	C	• Implementation of Plan measures relating to climate reduction targets	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets	• Internal monitoring of likely significant environmental effects of grants of permission	• Review internal systems
		• A competitive, low-carbon, climate-resilient and environmentally sustainable economy	• Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050	• Monitoring of Cork City Council's Climate Change Adaptation Strategy 2019-2024 • EPA Annual National Greenhouse Gas Emissions Inventory reporting • Climate Action Regional Office • Consultations with DECC (at monitoring evaluation - see Section 10.4)	• Where targets are not achieved, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		• Share of renewable energy in transport	• Contribute towards the target of the Renewable Energy Directive (2009/28/EC), for all Member States to reach a 10% share of renewable energy in transport by facilitating the development of electricity charging and transmission infrastructure, in compliance with the provisions of the Plan		
		• Carbon dioxide (CO_2) emissions across the electricity generation, built environment and transport sectors	• Contribute towards the target of aggregate reduction in carbon dioxide (CO_2) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors		
		• Energy consumption, the uptake of renewable options and solid fuels for residential heating	• To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating		
		• Proportion of journeys made by private fossil fuel-based car compared to 2016 levels	• Decrease in the proportion of journeys made by residents of the City using private fossil fuel-based car compared to 2016 levels	• CSO data • Monitoring of Cork City Council's Climate Change Adaptation Strategy 2019-2024	• Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		• Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures	• CSO data • Monitoring of Cork City Council's Climate Change Adaptation Strategy 2019-2024	• Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.

[72] Please also refer to relevant legislation and requirements under Section 4.10, Section 8.6, Section 8.8.5 and Appendix I. Targets under the national Climate Action Plan are reviewed and updated periodically and include those under the headings of Electricity, Built Environment, Transport, Agriculture, Forestry & Land Use and Enterprise.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Cultural Heritage	CH	• Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan	• Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan	• Internal monitoring of likely significant environmental effects of grants of permission	• Where monitoring reveals visitor or development pressure is causing negative effects on designated archaeological or architectural heritage, the Council will work with the Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation.
		• Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan	• Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan	• Consultation with DHLGH (see Section 10.4).	
Landscape	L	• Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan	• No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan	• Internal monitoring of likely significant environmental effects of grants of permission	• Where monitoring reveals developments permitted which result in avoidable adverse visual impacts on the landscape, the Council will re-examine Plan provisions and the effectiveness of their implementation

Appendix I Relationship with Legislation and Other Policies, Plans and Programmes

This appendix is not intended to be a full and comprehensive review of EU Directives, the transposing regulations or the regulatory framework for environmental protection and management. The information is not exhaustive and it is recommended to consult the Directive, Regulation, Plan or Programme to become familiar with the full details of each.

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
International/European Level			
SEA Directive (2001/42/EC)	• Contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. • Provide for a high level of protection of the environment by carrying out an environmental assessment of plans and programmes which are likely to have significant effects on the environment.	• Carry out and environmental assessment for plans or programmes referred to in Articles 2 to 4 of the Directive. • Prepare an environmental report which identifies, describes and evaluates the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives that consider the objectives and the geographical scope of the plan or programme. • Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission. • Consult other Member States where the implementation of a plan or programme is likely to have transboundary environmental effects. • Inform relevant authorities and stakeholders on the decision to implement the plan or programme. • Issue a statement to include requirements detailed in Article 9 of the Directive. • Monitor and mitigate significant environmental effects identified by the assessment.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EIA Directive (2011/92/EU as amended by 2014/52/EU)	• Requires the assessment of the environmental effects of public and private projects which are likely to have significant effects on the environment. • Aims to assess and implement avoidance or mitigation measures to eliminate environmental effects, before consent is given of projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. Those projects are defined in Article 4.	• All projects listed in Annex I are considered as having significant effects on the environment and require an EIA. • For projects listed in Annex II, a "screening procedure" is required to determine the effects of projects on the basis of thresholds/criteria or a case by case examination. This should take into account Annex III. • The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 12, the direct and indirect effects of a project on the following factors: human beings, fauna and flora, soil, water, air, climate and the landscape, material assets and the cultural heritage, the interaction between each factor. • Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission before a decision is made.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Habitats Directive (92/43/EEC)	• Promote the preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and of wild fauna and flora. • Contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora. • Maintain or restore to favourable conservation status, natural habitats and species of wild fauna and flora of community interest. • Promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements.	• Propose and protect sites of importance to habitats, plant and animal species. • Establish a network of European sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, to enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. • Carry out comprehensive assessment of habitat types and species present. • Establish a system of strict protection for the animal species and plant species listed in Annex IV.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Birds Directive (2009/147/EC)	• Conserve all species of naturally occurring birds in the wild state including their eggs, nests and habitats. • Protect, manage and control these species and comply with regulations relating to their exploitation. • The species included in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.	• Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Annex 1. • Preserve, maintain and establish biotopes and habitats to include the creation of protected areas (Special Protection Areas). • Ensure the upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones, re-establish destroyed biotopes and creation of biotopes. • Measures for regularly occurring migratory species not listed in Annex I is required as regards their breeding, moulting and wintering areas and staging posts along their migration routes. The protection of wetlands and particularly wetlands of international importance.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Nitrates Directive (91/676/EC)	• Reducing water pollution caused or induced by nitrates from agricultural sources and – preventing further such pollution.	Ireland's Nitrates Action Programme is designed to prevent pollution of surface waters and ground water from agricultural sources and to protect and improve water quality. Ireland's third NAP came into operation in 2014. Each Member State's NAP must include: • a limit on the amount of livestock manure applied to the land each year • set periods when land spreading is prohibited due to risk	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		• set capacity levels for the storage of livestock manure	environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Integrated Pollution Prevention Control Directive (2008/1/EC)	• The purpose of this Directive is to achieve integrated prevention and control of pollution arising from the activities listed in Annex I. It lays down measures designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land from the abovementioned activities, including measures concerning waste, in order to achieve a high level of protection of the environment taken as a whole, without prejudice to Directive 85/337/EEC and other relevant Community provisions.	The IPPC Directive is based on several principles: • an integrated approach • best available techniques, • flexibility; and • public participation	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Plant Protection (products) Directive 2009/127/EC	• The Directive aims at reducing the risks and impacts of pesticide use on human health and • the environment by introducing different targets, tools and measures such as Integrated Pest • Management (IPM) or National Action Plans (NAPs).	• The Framework Directive applies to pesticides which are plant protection products. • Regarding pesticide application equipment already in professional use, the Framework Directive introduces requirements for the inspection and maintenance to be carried out on such equipment.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Renewables Directive (2009/28/EC)	• The Renewable Energy Directive establishes an overall policy for the production and promotion of energy from renewable sources in the EU. • It requires the EU to fulfil at least 20% of its total energy needs with renewables by 2020 – to be achieved through the attainment of individual national targets. • All EU countries must also ensure that at least 10% of their transport fuels come from renewable sources by 2020.	• The Directive promotes cooperation amongst EU countries (and with countries outside the EU) to help them meet their renewable energy targets. • The Directive specifies national renewable energy targets for each country, taking into account its starting point and overall potential for renewables. • EU countries set out how they plan to meet these targets and the general course of their renewable energy policy in national renewable energy action plans. • Progress towards national targets is measured every two years when EU countries publish national renewable energy progress reports.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Indirect Land Use Change Directive (2012/0288 (COD))	• Article 3(4) of Directive 2009/28/EC of the European Parliament and of the Council (3) requires Member States to ensure that the share of energy from renewable energy sources in all forms of transport in 2020 is at least 10 % of their final energy consumption. • The blending of biofuels is one of the methods available for Member States to meet this target, and is expected to be the main contributor. • Other methods available to meet the target are the reduction of energy consumption, which is imperative because a mandatory percentage target for energy from renewable sources is likely to become increasingly difficult to achieve sustainably if overall demand for energy for transport continues to rise, and the use of electricity from renewable energy sources.	• Limit the contribution that conventional biofuels (with a risk of ILUC emissions) make towards attainment of the targets in the Renewable Energy Directive; • Improve the greenhouse gas performance of biofuel production processes (reducing associated emissions) by raising the greenhouse gas saving threshold for new installations subject to protecting installations already in operation on 1st July 2014; • Encourage a greater market penetration of advanced (low-ILUC) biofuels by allowing such fuels to contribute more to the targets in the Renewable Energy Directive than conventional biofuels; • Improve the reporting of greenhouse gas emissions by obliging Member States and fuel suppliers to report the estimated indirect land-use change emissions of biofuels.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Alternative Fuels Infrastructure Directive (2014/94/EU)	• This Directive establishes a common framework of measures for the deployment of alternative fuels infrastructure in the Union in order to minimise dependence on oil and to mitigate the environmental impact of transport.	• This Directive sets out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles and refuelling points for natural gas (LNG and CNG) and hydrogen, to be implemented by means of Member States' national policy frameworks, as well as common technical specifications for such recharging and refuelling points, and user information requirements.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Energy Efficiency Directive (2012/27/EU)	• Establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020. • Under the Directive, all EU countries are required to use energy more efficiently at all stages of the energy chain, from production to final consumption.	• Energy distributors or retail energy sales companies have to achieve 1.5% energy savings per year through the implementation of energy efficiency measures • EU countries can opt to achieve the same level of savings through other means, such as improving the efficiency of heating systems, installing double glazed windows or insulating roofs	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and

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		• The public sector in EU countries should purchase energy efficient buildings, products and services • Every year, governments in EU countries must carry out energy efficient renovations on at least 3% (by floor area) of the buildings they own and occupy • Energy consumers should be empowered to better manage consumption. This includes easy and free access to data on consumption through individual metering • National incentives for SMEs to undergo energy audits • Large companies will make audits of their energy consumption to help them identify ways to reduce it • Monitoring efficiency levels in new energy generation capacities.	cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Seveso Directive (2012/18/EU)	• This Directive lays down rules for the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment, with a view to ensuring a high level of protection throughout the Union in a consistent and effective manner.	The Seveso Directive is well integrated with other EU policies, thus avoiding double regulation or other administrative burden. This includes the following related policy areas: • Classification, labelling and packaging of chemicals; • The Union's Civil Protection Mechanism; • The Security Union Agenda including CBRN-E and Protection of critical infrastructure; • Policy on environmental liability and on the protection of the environment through criminal law; • Safety of offshore oil and gas operations.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Union Biodiversity Strategy to 2020	• Aims to halt or reverse biodiversity loss and speed up the EU's transition towards a resource efficient and green economy. • Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible.	• Outlines six targets and twenty actions to aid European Union in halting the loss to biodiversity and eco-system services. • The six targets cover: o Full implementation of EU nature legislation to protect biodiversity o Maintaining, enhancing and protecting for ecosystems, and green infrastructure o Ensuring sustainable agriculture, and forestry o Sustainable management of fish stocks o Reducing invasive alien species o Addressing the global need to contribute towards averting global biodiversity loss	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Biodiversity Strategy for 2030 - Bringing nature back into our lives (European Commission, 2020)	The EU's biodiversity strategy for 2030 is a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. The strategy aims to put Europe's biodiversity on a path to recovery by 2030, and contains specific actions and commitments.	The Strategy contains specific commitments and actions to be delivered by 2030, including: • Establishing a larger EU-wide network of protected areas on land and at sea, building upon existing Natura 2000 areas, with strict protection for areas of very high biodiversity and climate value. • An EU Nature Restoration Plan - a series of concrete commitments and actions to restore degraded ecosystems across the EU by 2030, and manage them sustainably, addressing the key drivers of biodiversity loss. • A set of measures to enable the necessary transformative change: setting in motion a new, strengthened governance framework to ensure better implementation and track progress, improving knowledge, financing and investments and better respecting nature in public and business decision-making. • Measures to tackle the global biodiversity challenge, demonstrating that the EU is ready to lead by example towards the successful adoption of an ambitious global biodiversity framework under the Convention on Biological Diversity.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Green Infrastructure Strategy	Aims to create a robust enabling framework in order to promote and facilitate Green Infrastructure (GI) projects.	• Promoting GI in the main EU policy areas. • Supporting EU-level GI projects. • Improving access to finance for GI projects. • Improving information and promoting innovation.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
UNESCO (1972) The Convention for the Protection of the World Cultural and Natural Heritage	• links concepts of nature conservation and the preservation of cultural properties; and • recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two.	• sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them; • each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage; • encourages to integrate the protection of the cultural and natural heritage into regional planning programmes, set up staff and services at their sites, undertake scientific and technical conservation research and adopt measures which give this heritage a function in the day-to-day life of the community.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory

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			framework for environmental protection and management.
UN (1992) The Convention on Biological Diversity	An overall objective is to develop national strategies for the conservation and sustainable use of biological diversity.	The Convention has three main goals: • the conservation of biological diversity (or biodiversity); • the sustainable use of its components; and • the fair and equitable sharing of benefits arising from genetic resources.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
UN (1992) Framework Convention on Climate Change	It is aimed at stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.	The Convention acknowledges the vulnerability of all countries to the effects of climate change and calls for special efforts to ease the consequences, especially in developing countries which lack the resources to do so on their own.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
UN Kyoto Protocol (2nd Kyoto Period), the Second European Climate Change Programme (ECCP II), Paris climate conference (COP21) 2015 (Paris Agreement)	The UN Kyoto Protocol set of policy measures to reduce greenhouse gas emissions. The Second European Climate Change Programme (ECCP II) aims to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol. At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.	• The Kyoto Protocol is implemented through the European Climate Change Programme (ECCP II). • EU member states implement measures to improve on or compliment the specified measures and policies arising from the ECCP. • Under COP21, governments agreed to come together every 5 years to set more ambitious targets as required by science; report to each other and the public on how well they are doing to implement their targets; track progress towards the long-term goal through a robust transparency and accountability system.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU 2020 Climate and Energy Package	• Binding legislation which aims to ensure the European Union meets its climate and energy targets for 2020. • Aims to achieve a 20% reduction in EU greenhouse gas emissions from 1990 levels. • Aims to raise the share of EU energy consumption produced from renewable resources to 20%. • Achieve a 20% improvement in the EU's energy efficiency.	Four pieces of complimentary legislation: • Reform of the EU Emissions Trading System (EU ETS) to include a cap on emission allowances in addition to existing system of national caps. • Member States have agreed national targets for non-EU ETS emissions from countries outside the EU. • Meet the national renewable energy targets of 16% for Ireland by 2020. • Preparing a legal framework for technologies in carbon capture and storage.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU 2030 Framework for Climate and Energy	• A 2030 Framework for climate and energy, including EU-wide targets and policy objectives for the period between 2020 and 2030 that has been agreed by European countries. • Targets include a 40% cut in greenhouse gas emissions compared to 1990 levels, at least a 27% share of renewable energy consumption and at least 27% energy savings compared with the business-as-usual scenario.	To meet the targets, the European Commission has proposed the following policies for 2030: • A reformed EU emissions trading scheme (ETS). • New indicators for the competitiveness and security of the energy system, such as price differences with major trading partners, diversification of supply, and interconnection capacity between EU countries. • First ideas for a new governance system based on national plans for competitive, secure, and sustainable energy. These plans will follow a common EU approach. They will ensure stronger investor certainty, greater transparency, enhanced policy coherence and improved coordination across the EU.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Clean Air for Europe Directive (2008/50/EC) **(EU Air Framework Directive)** **Fourth Daughter Directive (2004/107/EC)**	• The CAFE Directive merges existing legislation into a single directive (except for the fourth daughter directive). • Sets new air quality objectives for $PM_{2.5}$ (fine particles) including the limit value and exposure related objectives. • Accounts for the possibility to discount natural sources of pollution when assessing compliance against limit values. • Allows the possibility for time extensions of three years (PM_{10}) or up to five years (NO_2, benzene) for complying with limit values, based on conditions and the assessment by the European Commission.	• Sets objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole. • Aims to assess the ambient air quality in Member States on the basis of common methods and criteria. • Obtains information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term trends and improvements resulting from national and community measures. • Ensures that such information on ambient air quality is made available to the public. • Aims to maintain air quality where it is good and improving it in other cases.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory

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	• The Fourth Daughter Directive lists pollutants, target values and monitoring requirements for the following: arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.	• Aims to promote increased cooperation between the Member States in reducing air pollution.	framework for environmental protection and management.
Noise Directive (2002/49/EC)	The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing Community policy on noise reduction from source.	The Directive requires competent authorities in Member States to: • Draw up strategic noise maps for major roads, railways, airports and agglomerations, using harmonised noise indicators and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels; • Draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and • Inform and consult the public about noise exposure, its effects, and the measures considered to address noise. The Directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Floods Directive (2007/60/EC)	• Establishes a framework for the assessment and management of flood risks • Reduce adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community	• Assess all water courses and coast lines at risk from flooding through Flood Risk Assessment • Prepare flood hazard maps and flood risk maps outlining the extent or potential of flooding and assets and humans at risk in these areas at River Basin District level (Article 3(2) (b)) and areas covered by Article 5(1) and Article 13(1) (b) in accordance with paragraphs 2 and 3. • Implement flood risk management plans and take adequate and coordinated measures to reduce flood risk for the areas covered by the Articles listed above. • Inform the public and allow the public to participate in planning process.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Framework Directive (2000/60/EC)	• Establish a framework for the protection of water bodies to include inland surface waters, transitional waters, coastal waters and groundwater and their dependent wildlife and habitats. • Preserve and prevent the deterioration of water status and where necessary improve and maintain "good status" of water bodies. • Promote sustainable water usage. • The Water Framework Directive repealed the following Directives: o The Drinking Water Abstraction Directive o Sampling Drinking Water Directive o Exchange of Information on Quality of Surface Freshwater Directive o Shellfish Directive o Freshwater Fish Directive o Groundwater (Dangerous Substances) Directive o Dangerous Substances Directive	• Protect, enhance and restore all water bodies and meet the environmental objectives outlined in Article 4 of the Directive. • Achieve "good status" for all waters. • Manage water bodies based on identifying and establishing river basins districts. • Involve the public and streamline legislation. • Prepare and implement a River Basin Management Plan for each river basin districts identified and a Register of Protected Areas. • Establish a programme of monitoring for surface water status, groundwater status and protected areas. • Recover costs for water services.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Groundwater Directive (2006/118/EC)	• Protect, control and conserve groundwater. • Prevent the deterioration of the status of all bodies of groundwater. • Implements measures to prevent and control groundwater pollution, including criteria for assessing good groundwater chemical status and criteria for the identification of significant and sustained upward trends and for the definition of starting points for trend reversals.	• Meet minimum groundwater standards listed in Annex 1 of Directive. • Meet threshold values adopted by national legislation for the pollutants, groups of pollutants and indicators of pollution which have been identified as contributing to the characterisation of bodies or groups of bodies of groundwater as being at risk, also taking into account Part B of Annex II.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Drinking Water Directive (98/83/EC)	• Improve and maintain the quality of water intended for human consumption. • Protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.	• Set values applicable to water intended for human consumption for the parameters set out in Annex I. • Set values for additional parameters not included in Annex I, where the protection of human health within national territory or part of it so requires. The values set should, as a minimum, satisfy the requirements of Article 4(1) (a). • Implement all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to check that the water available to consumers meets the requirements of this Directive and in particular the parametric values set in accordance with Article 5. • Ensure that any failure to meet the parametric values set in accordance with Article 5 is immediately investigated in order to identify the cause. • Ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action. • Undertake remedial action to restore the quality of the water where necessary to protect human health.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		• Notify consumers when remedial action is being undertaken except where the competent authorities consider the non-compliance with the parametric value to be trivial.	
Urban Waste Water Treatment Directive (91/271/EEC)	• This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors. • The objective of the Directive is to protect the environment from the adverse effects of waste water discharges.	• Urban waste water entering collecting systems shall before discharge, be subject to secondary treatment. • Annex II requires the designation of areas sensitive to eutrophication which receive water discharges. • Establishes minimum requirements for urban waste water collection and treatment systems in specified agglomerations to include special requirements for sensitive areas and certain industrial sectors.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Environmental Liability Directive (2004/35/EC) as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU	• Establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage.	• Relates to environmental damage caused by any of the occupational activities listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities; damage to protected species and natural habitats caused by any occupational activities other than those listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at fault or negligent. • Where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, the operator shall, without delay, take the necessary preventive measures. • Where environmental damage has occurred the operator shall, without delay, inform the competent authority of all relevant aspects of the situation and take all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and the necessary remedial measures, in accordance with Article 7. • The operator shall bear the costs for the preventive and remedial actions taken pursuant to this Directive. • The competent authority shall be entitled to initiate cost recovery proceedings against the operator. • The operator may be required to provide financial security guarantees to ensure their responsibilities under the directive are met. • The Environmental Liability Directive has been amended through a number of Directives. Implementation of the Environmental Liability Directive is contributed towards by a Multi-Annual Work Programme (MAWP) 'Making the Environmental Liability Directive more fit for purpose' that is updated annually to changing developments, growing knowledge and new needs.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Convention on the Protection of the Archaeological Heritage (Valletta 1992)	• The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.	The Valletta Convention makes the conservation and enhancement of the archaeological heritage one of the goals of urban and regional planning policies. The Convention sets guidelines for the funding of excavation and research work and publication of research findings. It also deals with public access, in particular to archaeological sites, and educational actions to be undertaken to develop public awareness of the value of the archaeological heritage. It also constitutes an institutional framework for pan-European co-operation on the archaeological heritage, entailing a systematic exchange of experience and experts among the various States.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Convention of the Protection of the Architectural Heritage of Europe (Granada 1995)	• The main purpose of the Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It also affirms the need for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. It establishes the principles of "European co-ordination of conservation policies" including consultations regarding the thrust of the policies to be implemented.	• The reinforcement and promotion of policies for protecting and enhancing the heritage within the territories of the parties. • The affirmation of European solidarity with regard to the protection of the heritage and the fostering of practical co-operation between states and regions.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
ICOMOS (2011) Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes ('Dublin Principles')	• It is aimed to assist in the documentation, protection, conservation and appreciation of industrial heritage as part of the heritage of human societies around the World.	• (I) Document and understand industrial heritage structures, sites, areas and landscapes and their values; • (II) Ensure effective protection and conservation of the industrial heritage structures, sites, areas and landscapes;	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

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		• (III) Conserve and maintain the industrial heritage structures, sites, areas and landscapes; and • (IV) Present and communicate the heritage dimensions and values of industrial structures, sites, areas and landscapes to raise public and corporate awareness, and support training and research.	environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Faro 2005)	• Cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time. • A heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations.	• Recognise that rights relating to cultural heritage are inherent in the right to participate in cultural life, as defined in the Universal Declaration of Human Rights. • Recognise individual and collective responsibility towards cultural heritage. • Emphasise that the conservation of cultural heritage and its sustainable use have human development and quality of life as their goal. • Take the necessary steps to apply the provisions of this Convention concerning the role of cultural heritage in the construction of a peaceful and democratic society. • Greater synergy of competencies among all the public, institutional and private actors concerned.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Landscape Convention 2000	• The developments in agriculture, forestry, industrial and mineral production techniques, together with the practices followed in town and country planning, transport, networks, tourism and recreation, and at a more general level, changes in the world economy, have in many cases accelerated the transformation of landscapes. The Convention expresses a concern to achieve sustainable development based on a balanced and harmonious relationship between social needs, economic activity and the environment. It aims to respond to the public's wish to enjoy high quality landscapes.	• Promote protection, management and planning of landscapes. • Organise European co-operation on landscape issues.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Seventh Environmental Action Programme (EAP) of the European Community (2013-2020)	It identifies three key objectives: • to protect, conserve and enhance the Union's natural capital • to turn the Union into a resource-efficient, green, and competitive low-carbon economy • to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing	Four so called "enablers" will help Europe deliver on these objectives (goals): • Better implementation of legislation. • Better information by improving the knowledge base. • More and wiser investment for environment and climate policy. • Full integration of environmental requirements and considerations into other policies. Two additional horizontal priority objectives complete the programme: • To make the Union's cities more sustainable. • To help the Union address international environmental and climate challenges more effectively.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats)	The convention has three main aims: • to conserve wild flora and fauna and their natural habitats • to promote cooperation between states • to give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species	The Parties under the convention recognise the intrinsic value of nature, which needs to be preserved and passed to future generations, they also: • Seek to ensure the conservation of nature in their countries, paying particular attention to planning and development policies and pollution control. • Look at implementing the Bern Convention in central Eastern Europe and the Caucus. • Take account of the potential impact on natural heritage by other policies. • Promote education and information of the public, ensuring the need to conserve species is understood and acted upon. • Develop an extensive number of species action plans, codes of conducts, and guidelines, at their own initiative or in co-operation with other organisations. • Created the Emerald Network, an ecological network made up of Areas of Special Conservation Interest.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Bali Road Map (2007)	The overall goals of the project are twofold: • To increase national capacity to co-ordinate ministerial views, participate in the UNFCCC process, and negotiate positions within the timeframe of the Bali Action Plan; and • To assess investment and financial flows to address climate change for up to three key sectors and/or economic activities.	The Bali Action Plan is centred on four main building Blocks: • mitigation • adaptation • technology • financing	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cancun Agreements (2010)	Set of decisions taken at the COP 16 Conference in Cancun in 2010 which addresses a series of key issues in the fight against climate change. Cancun Agreements' main objectives cover: • Mitigation • Transparency of actions	Among the most prominent agreements is the establishment of a Green Climate Fund to transfer money from the developed to developing world to tackle the impacts of climate change.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

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	• Technology • Finance • Adaptation • Forests • Capacity building		environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Doha Climate Gateway (2012)	Set of decisions taken at the COP 18 meeting in Doha in 2012 which pave the way for a new agreement in Paris in 2015.	• Set out a timetable to adopt a universal climate agreement by 2015 (to come into effect in 2020); • Complete the work under Bali Action Plan and to focus on new completing new targets; • Strengthen the aim to cut greenhouse gases and help vulnerable countries to adapt; • Amend Kyoto Protocol to include a new commitment period for cutting down the greenhouse gases emissions; and • Provide the financial and technology support and new institutions to allow clean energy investment and sustainable growth in developing countries.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Common Agricultural Policy	• To improve agricultural productivity, so that consumers have a stable supply of affordable food; and • To ensure that EU farmers can make a reasonable living.	• ensuring viable food production that will contribute to feeding the world's population, which is expected to rise considerably in the future; • Climate change and sustainable management of natural resources; • Looking after the countryside across the EU and keeping the rural economy alive.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU REACH Regulation (EC 1907/2006)	• Aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.	The aims are achieved by applying REACH, namely: • Registration, • Evaluation, • Authorisation; and • Restriction of chemicals. REACH also aims to enhance innovation and competitiveness of the EU chemicals industry.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Stockholm Convention	• The objective of the Stockholm Convention is to protect human health and the environment from persistent organic pollutants.	• Prohibit and/or eliminate the production and use, as well as the import and export, of the intentionally produced Persistent Organic Pollutants (POPs) that are listed in Annex A to the Convention • Restrict the production and use, as well as the import and export, of the intentionally produced POPs that are listed in Annex B to the Convention • Reduce or eliminate releases from unintentionally produced POPs that are listed in Annex C to the Convention • Ensure that stockpiles and wastes consisting of, containing or contaminated with POPs are managed safely and in an environmentally sound manner • To target additional POPs • Other provisions of the Convention relate to the development of implementation plans, information exchange, public information, awareness and education, research, development and monitoring, technical assistance, financial resources and mechanisms, reporting, effectiveness evaluation and non-compliance	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ramsar Convention	The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".	Under the "three pillars" of the Convention, the Contracting Parties commit to: • Work towards the wise use of all their wetlands; • Designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management; • Cooperate internationally on transboundary wetlands, shared wetland systems and shared species.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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European 2020 Strategy for Growth	Europe 2020 sets out a vision of Europe's social market economy for the 21st century and puts forward three mutually reinforcing priorities: • Smart growth: developing an economy based on knowledge and innovation; • Sustainable growth: promoting a more resource efficient, greener and more competitive economy; • Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.	In order to reach these priorities, the Commission proposes five quantitative targets to fulfil by 2020: 1. 75 % of the population aged 20-64 should be employed; 2. 3% of the EU's GDP should be invested in R&D; 3. the "20/20/20" climate/energy targets should be met (including an increase to 30% of emissions reduction if the conditions are right); 4. the share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree; 5. 20 million less people should be at risk of poverty.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Parliament resolutions, including the European Green Deal (EGD) 2020	The deal sets out how to make Europe the first climate-neutral continent by 2050, boosting the economy, improving people's quality of life, caring for nature and leaving no one behind.	• It sets out a roadmap with actions to boost the efficient use of resources by moving to a clean, circular economy, restore biodiversity and cut pollution. • It outlines investments required, financing tools available and explains how to ensure a just and inclusive transition. • In order to meet the goal to become climate neutral by 2050 as part of the European Green Deal, the European Union (EU) Commission proposed on 4th March 2020 to bring about the first European Climate Law and legally bind the target of net zero greenhouse gas emissions by 2050.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU (2018) Clean Air Policy Package	Aims to substantially reduce air pollution across the EU.	The proposed strategy sets out objectives for reducing the health and environmental impacts of air pollution by 2030, and contains legislative proposals to implement stricter standards for emissions and air pollution.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Leaders Pledge for Nature 2020	Political leaders (including Taoiseach Michael Martin) participating in the United Nations Summit on Biodiversity in September 2020, representing 75 countries from all regions and the European Union, have committed to reversing biodiversity loss by 2030.	As part of the UN Decade of Action to achieve sustainable development, the leaders commit to achieve the vision of Living in Harmony with Nature by 2050 by undertaking ten actions, including: • Putting biodiversity, climate, and the environment at the heart of COVID-19 recovery strategies and investments as well as national and international development and cooperation; • Developing and implementing an ambitious and transformational post-2020 global biodiversity framework for adoption at the 15th meeting of the Conference of the Parties (COP 15) to the UN Convention on Biological Diversity (CBD) in Kunming, China, as a key instrument to reach the SDGs; • Raising ambition and aligning domestic climate policies with the Paris Agreement on climate change, with enhanced nationally determined contributions (NDCs) and long-term strategies consistent with the temperature goals of the Paris Agreement, and the objective of net zero greenhouse gas (GHG) emissions by mid-century, and strengthen climate resilience of economies and ecosystems; and • Mainstream biodiversity into relevant sectoral and cross-sectoral policies at all levels, including in food production, agriculture, fisheries and forestry, energy, tourism, infrastructure and extractive industries, and trade and supply chains, as well as into key international agreements and processes.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Level			
Ireland 2040 - Our Plan, the National Planning Framework and the National Development Plan	• The National Planning Framework is the Government's high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between. • The National Development Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework. This will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people.	National Strategic Outcomes as follows: 1. Compact Growth 2. Enhanced Regional Accessibility 3. Strengthened Rural Economies and Communities 4. Sustainable Mobility 5. A Strong Economy, supported by Enterprise, Innovation and Skills 6. High-Quality International Connectivity 7. Enhanced Amenity and Heritage 8. Transition to a Low-Carbon and Climate-Resilient Society 9. Sustainable Management of Water and other Environmental Resources 10. Access to Quality Childcare, Education and Health Services	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Planning, Land Use and Transport Outlook 2040 [in preparation]	The PLUTO will take account of forecasted future economic and demographic scenarios, affordability considerations and relevant Government policies and will: 1. Quantify in broad terms the appropriate scale of financial investment in land transport over the long term; 2. Consider how fiscal, environmental and technological developments might impact on this investment; and, 3. Identify strategic priorities for future investment to ensure land transport infrastructure provision facilitates the objectives of Project Ireland 2040.	In preparation	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Planning and Development Act 2000 (as amended)	• The core principal objectives of this Act are to amend the Planning Acts of 2000 – 2009 with specific regard given to supporting economic renewal and sustainable development.	• Development, with certain exceptions, is subject to development control under the Planning Acts and the local authorities grant or refuse planning permission for development, including ones within protected areas. • There are, however, a range of exemptions from the planning system. Use of land for agriculture, peat extraction and afforestation, subject to certain thresholds, is generally exempt from the requirement to obtain planning permission. • Additionally, Environmental Impact Assessment (EIA) is required for a range of classes and large-scale projects. • Under planning legislation, Development Plans must include mandatory objectives for the conservation of the natural heritage and for the conservation of European sites and any other sites which may be prescribed. There are also discretionary powers to set objectives for the conservation of a variety of other elements of the natural heritage.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Environmental Assessment of Certain Plans and Programmes Regulations 2004 (S.I. 435 of 2004), as amended by S.I. 200 of 2011	• The purpose of these Regulations is to transpose into Irish law Directive 2001/42/EC of 27 June 2001 (O.J. No. L 197, 21 July 2001) on the assessment of the effects of certain plans and programmes on the environment — commonly known as the Strategic Environmental Assessment (SEA) Directive.	• The Regulations cover plans and programmes in all of the sectors listed in article 3(2) of the Directive except land-use planning. • These Regulations also amend certain provisions of the Planning and Development Act 2000 to provide the statutory basis for the transposition of the Directive in respect of land-use planning. • Transposition in respect of the land-use planning sector is contained in the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011, as amended)	• These Regulations provide a new for the implementation in Ireland of Council Directive 92/43/EEC on habitats and protection of wild fauna and flora (as amended) and for the implementation of Directive 2009/147/EC of the European Parliament and of the Council on the protection of wild birds.	• They provide, among other things, for: the appointment and functions of authorized officers; identification, classification and other procedures relative to the designation of Community sites. • The Regulations have been prepared to address several judgments of the CJEU against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Waste Management Act 1996, as amended	• To make provision in relation to the prevention, management and control of waste; to give effect to provisions of certain acts adopted by institutions of the European communities in respect of those matters; to amend the Environmental Protection Agency Act, 1992, and to repeal certain enactments and to provide for related matters.	• The Waste Management Act contains a number of key legal obligations, including requirements for waste management planning, waste collection and movement, the authorisation of waste facilities, measures to reduce the production of waste and/or promote its recovery.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities Environmental Objectives (FPM) Regulations 2009 (S.I 296 of 2009)	• The purpose of these Regulations is to support the achievement of favourable conservation status for freshwater pearl mussels	• Set environmental quality objectives for the habitats of the freshwater pearl mussel populations named in the First Schedule to these Regulations that are within the boundaries of a site notified in a candidate list of European sites, or designated as a Special Area of Conservation, under the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94/1997). • Require the production of sub-basin management plans with programmes of measures to achieve these objectives. • Set out the duties of public authorities in respect of the sub-basin management plans and programmes of measure.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I 9 of 2010), as amended (S.I. No. 366 of 2016)	• To amend the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010) to make further provision to implement Commission Directive 2014/80/EU of 20 June 2014 amending Annex II to Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration.	The substances and threshold values set out in Schedule 5 to S.I. No. 9 of 2010 have been reviewed and amended where necessary, based on existing monitoring information and international guidelines on appropriate threshold values. • Part A of Schedule 6 has been amended to include changes to the rules governing the determination of background levels for the purposes of establishing threshold values for groundwater pollutants and indicators of pollution. • Part B of Schedule 6 has been amended to include nitrites and phosphorus (total) / phosphates among the minimum list of pollutants and their indicators which the Environmental Protection Agency (EPA) must consider when establishing threshold values. • Part C of Schedule 6 amends the information to be provided to the Minister by the EPA with regard to the pollutants and their indicators for which threshold values have been established.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 (S.I. No. 31 of 2014)	• These Regulations, which give effect to Ireland's 3rd Nitrates Action Programme, provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources	The Regulations include measures such as: • Periods when land application of fertilisers is prohibited • Limits on the land application of fertilisers • Storage requirements for livestock manure; and • Monitoring of the effectiveness of the measures in terms of agricultural practice and impact on water quality.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Climate Action and Low Carbon Development Act 2015, as amended	• An Act to provide for the approval of plans by the Government in relation to climate change for the purpose of pursuing the transition to a low carbon, climate resilient and environmentally sustainable economy.	When considering a plan or framework, for approval, the Government shall endeavour to achieve the national transition objective within the period to which the objective relates and shall, in endeavouring to achieve that objective, ensure that such objective is achieved by the implementation of measures that are cost effective and shall, for that purpose, have regard to: • The ultimate objective specified in Article 2 of the United Nations Framework Convention on Climate Change done at New York on 9 May 1992 and any mitigation commitment entered into by the European Union in response or otherwise in relation to that objective, • The policy of the Government on climate change, • Climate justice, • Any existing obligation of the State under the law of the European Union or any international agreement referred to in section 2; and • The most recent national greenhouse gas emissions inventory and projection of future greenhouse gas emissions, prepared by the Agency.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Climate Action Plan	The Climate Action Plan 2021 provides a detailed plan for taking decisive action to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero emissions by no later than 2050, as committed to in the Programme for Government and set out in the Climate Act 2021.	The Plan lists the actions needed to deliver on our climate targets and sets indicative ranges of emissions reductions for each sector of the economy. It will be updated annually, including in 2022, to ensure alignment with Ireland's legally binding economy-wide carbon budgets and sectoral ceilings.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Sustainable Development Goals National Implementation Plan (2018 – 2020)	• National Implementation Plan 2018 - 2020 is in direct response to the 2030 Agenda for Sustainable Development and provides a whole-of-government approach to implement the 17 Sustainable Development Goals (SDGs). • The Plan provides an 'SDG Matrix' which identifies the responsible Government Departments for each of the 169 targets. It also includes an 'SDG Policy Map' indicating the relevant national policies for each of the targets.	The Plan identifies four strategic priorities to guide implementation: • Awareness: raise public awareness of the SDGs; • Participation: provide stakeholders opportunities to engage and contribute to follow-up and review processes, and further develop national implementation of the Goals; • Support: encourage and support efforts of communities and organisations to contribute towards meeting the SDGs, and foster public participation; and • Policy alignment: develop alignment of national policy with the SDGs and identify opportunities for policy coherence.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Infrastructure and Capital Investment Plan (2016-2021)	• €27 billion multi-annual Exchequer Capital Investment Plan, which is supported by a programme of capital investment in the wider State sector, and which over the period 2016 to 2021 will help to lay the foundations for continued growth in Ireland.	• This Capital Plan reflects the Government's commitment to supporting strong and sustainable economic growth and raising welfare and living standards for all. • It includes allocations for new projects across a number of key areas and funding to ensure that the present stock of national infrastructure is refreshed and maintained.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and

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			cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Union (Birds and Natural Habitats) (Sea-Fisheries) Regulations 2013 (S.I. 290 of 2013)	These regulations have been drafted to implement the responsibilities of the Minister for Agriculture Food and the Marine in relation to sea fisheries in European sites, in accordance with the Habitats and Birds Directives as transposed by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011).	• Regulation 3 provides for the submission of a Fisheries Natura Plan in relation to planned fisheries; • Regulation 4 provides for a screening of a Fisheries Natura Plan to determine whether or not an appropriate assessment is required; • Regulation 5 provides for an appropriate assessment of a Fisheries Natura Plan and also provides for public and statutory consultation; • Regulation 6 provides for the Minister to make a determination to adopt a Fisheries Natura Plan. The Minister may amend, withdraw or revoke a plan; • Regulation 7 provides for publication of the adopted Fisheries Natura Plan; • Regulation 8 provides for a Risk Assessment of unplanned fisheries and also provides for public and statutory consultation on the assessment; • Regulation 9 provides for the issue of a Natura Declaration to prohibit, restrict including restricting by permit, control, etc. of sea fishing activities; • Regulation 10 provides for Natura Permits to be issued where required by Natura Declarations; and • Regulations 11 to 31 deal with functions of authorised officers and related matters, offences, etc.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ireland's National Renewable Energy Action Plan 2010 (Irish Government submission to the European Commission)	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 Directive 2009/28/EC.	The NREAP sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Strategy for Renewable Energy (2012-2020)	• The Government's overarching strategic objective is to make renewable energy an increasingly significant component of Ireland's energy supply by 2020, so that at a minimum it will achieve its legally binding 2020 target in the most cost-efficient manner for consumers. • Of critical importance is the role which the renewable energy sector plays in job creation and economic activity as part of the Government's action plan for jobs.	This document sets out five strategic goals, reflecting the key dimensions of the renewable energy challenge to 2020: • Increasing on and offshore wind, • Building a sustainable bioenergy sector, • Fostering R&D in renewables such as wave & tidal, • Growing sustainable transport; and • Building out robust and efficient networks.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Governments White Paper 'Ireland's Transition to a Low Carbon Energy Future' (2015 – 2030)	The White Paper sets out a vision and a framework to guide Irish energy policy between now and 2030. A complete energy policy update informed by the vision to transform Ireland into a low carbon society and economy by 2050.	2030 will represent a significant milestone, meaning: Reduced GHG emissions from the energy sector by between 80% and 95% Ensuring that secure supplies of competitive and affordable energy remain available to citizens and businesses.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Policy Position on Climate Action and Low Carbon Development (2014)	• The National Policy Position provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050. • Statutory authority for the plans is set out in the Climate Action and Low Carbon Development Act 2015.	National climate policy in Ireland: • Recognises the threat of climate change for humanity; • Anticipates and supports mobilisation of a comprehensive international response to climate change, and global transition to a low-carbon future; • Recognises the challenges and opportunities of the broad transition agenda for society; and • Aims, as a fundamental national objective, to achieve transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
National Clean Air Strategy [in preparation]	The Clean Air Strategy will provide the strategic policy framework necessary to identify and promote integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives.	• Having a National Strategy will provide a policy framework by which Ireland can develop the necessary policies and measures to comply with new and emerging EU legislation. • The Strategy should also help tackle climate change. • The Strategy will consider a wider range of national policies that are relevant to clean air policy such as transport, energy, home heating and agriculture. • In any discussion relating to clean air policy, the issue of people's health is paramount and this will be a strong theme of the Strategy.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EirGrid's Grid25 Strategy and associated Grid25 Implementation Programme 2017-2022	EirGrid's mission is to develop, maintain and operate a safe, secure, reliable, economical and efficient transmission system for Ireland; "*Our vision is of a grid developed to match future needs, so it can safely and reliably carry power all over the country to the major towns and cities and onwards to every home, farm and business where the electricity is consumed and so it can meet the needs of consumers and generators in a sustainable way."*	• Grid25, EirGrid's roadmap to uprate the electricity transmission grid by 2025, continues to be implemented so as to increase the capacity of the grid, to satisfy future demand, and to help Ireland meet its target of 40 per cent of electricity from renewable energy by 2020.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
All Island Grid Study 2008	• The All Island Grid Study is the first comprehensive assessment of the ability of the electrical power system and, as part of that, the transmission network ("the grid") on the island of Ireland to absorb large amounts of electricity produced from renewable energy sources. • The objective of this five-part study is to assess the technical feasibility and the relative costs and benefits associated with various scenarios for increased shares of electricity sourced from renewable energy in the all island power system.	Key conclusions of the study: • The presented results indicate that the differences in cost between the highest cost and the lowest cost portfolios are low (7%), given the assumptions made and costs included in the Study. • All but the high coal-based portfolio lead to significant reductions of CO_2 emissions compared to portfolio 1 • All but the high coal-based portfolio lead to reductions on the dependency of the all island system on fuel and electricity imports. • The limitations of the study may overstate the technical feasibility of the portfolios analysed and could impact the costs and benefits resulting. Further work is required to understand the extent of such impact. • Timely development of the transmission networks, requiring means to address the planning challenge, is a precondition for implementation of the portfolios considered. • Market mechanisms must facilitate the installation of complementary, i.e. flexible, dispatchable plant, so as to maintain adequate levels of system security.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Strategy for the Future Development of National and Regional Greenways (2018)	• The objective of this Strategy is to assist in the strategic development of nationally and regionally significant Greenways in appropriate locations constructed to an appropriate standard in order to deliver a quality experience for all Greenways users. • It also aims to increase the number and geographical spread of Greenways of scale and quality around the country over the next 10 years with a consequent significant increase in the number of people using Greenways as a visitor experience and as a recreational amenity.	• A Strategic Greenway network of national and regional routes, with a number of high capacity flagship routes that can be extended and/or link with local Greenways and other cycling and walking infrastructure; • Greenways of scale and appropriate standard that have significant potential to deliver an increase in activity tourism to Ireland and are regularly used by overseas visitors, domestic visitors and locals thereby contributing to a healthier society through increased physical activity; • Greenways that provide a substantially segregated off road experience linking places of interest, recreation and leisure in areas with beautiful scenery of different types with plenty to see and do; and • Greenways that provide opportunities for the development of local businesses and economies, and • Greenways that are developed with all relevant stakeholders in line with an agreed code of practice.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Water Resources Plan [in preparation]	• The NWRP is a plan on how to provide a safe, secure and reliable water supply to customers for the next 25 years, without causing adverse impact on the environment. • The objective of the NWRP is to set out how we intend to maintain the supply and demand for drinking water over the short, medium and long term whilst minimising the impact on the environment.	The key objectives of the plan are to: • Identify areas where there are current and future potential water supply shortfalls, taking into account normal and extreme weather conditions • Assess the current and future water demand from homes, businesses, farms, and industry • Consider the impacts of climate change on Ireland's water resources • Develop a drought plan advising measures to be taken before and during drought events • Develop a plan detailing how we deal with the material that is produced as a result of treating drinking water • Identify, develop and assess options to help meet potential shortfalls in water supplies • Assess the water resources available at a national level including lakes, rivers and groundwater	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Strategic Plan for Aquaculture Development (2014-2020)	Vision: *"Aquaculture in RC is economically, socially and ecologically sustainable, with a developed infrastructure, strong human potentials and an organized*	General development and growth objectives of marine and freshwater aquaculture (2014 – 2020):	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-

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	market. The consumption of aquaculture products is equal or above EU average, while the technological development of the sector is among the best in the EU."	• Strengthen the social, business and administrative environment for aquaculture development • Increase in the total production to 24,050 tonnes while adhering to the principles of economic, social and ecological sustainability • Improvement of the perception and increase in the national consumption of National products	combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Construction 2020, A Strategy for a Renewed Construction Sector	• Construction 2020 sets out a package of measures agreed by the Government and is aimed at stimulating activity in the building industry. • The Strategy aims both to increase the capacity of the sector to create and maintain jobs, and to deliver a sustainable sector, operating at an appropriate level. It seeks to learn the lessons of the past and to ensure that the right structures and mechanisms are in place so that they are not repeated.	This Strategy therefore addresses issues including: • A strategic approach to the provision of housing, based on real and measured needs, with mechanisms in place to detect and act when things are going wrong; • Continuing improvement of the planning process, striking the right balance between current and future requirements; • The availability of financing for viable and worthwhile projects; • Access to mortgage finance on reasonable and sustainable terms; • Ensuring we have the tools we need to monitor and regulate the sector in a way that underpins public confidence and worker safety; • Ensuring a fit for purpose sector supported by a highly skilled workforce achieving high quality and standards; and • Ensuring opportunities are provided to unemployed former construction workers to contribute to the recovery of the sector.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Sustainable Development: A Strategy for Ireland (1997)	• The overall aim of this Strategy is to ensure that economy and society in Ireland can develop to their full potential within a well-protected environment, without compromising the quality of that environment, and with responsibility towards present and future generations and the wider international community.	• The Strategy addresses all areas of Government policy, and of economic and societal activity, which impact on the environment. It seeks to re-orientate policies as necessary to ensure that the strong growth Ireland enjoys and seeks to maintain will be environmentally sustainable.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Landscape Strategy for Ireland 2015-2025 and National Landscape Character Assessment (pending preparation)	• The National Landscape Strategy will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape while positively managing its change. It will provide a high-level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions. • Landscape Strategy Vision: *"Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well-being of our society, environment and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management and planning."*	The objectives of the National Landscape Strategy are to: • Implement the European Landscape Convention by integrating landscape into the approach to sustainable development; • Establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape; • Provide a policy framework, which will put in place measures at national, sectoral - including agriculture, tourism, energy, transport and marine - and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of the landscape; • Ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ireland's National Waste Policy 2020 – 2025	The Policy sets out new targets to tackle waste and move towards a circular economy.	The plan includes halving our food waste by 2030, the introduction of a deposit and return scheme for plastic bottles and cans, a ban on certain single use plastics from July 2021, and a levy on disposable cups. Other measures include applying green criteria and circular economy principles in all public procurement, a waste recovery levy to encourage recycling, and ensuring all packaging is reusable or recyclable by 2030.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Hazardous Waste Management Plan (EPA) 2014-2020	This Plan sets out the priorities to be pursued over the next six years and beyond to improve the management of hazardous waste, taking into account the progress made since the previous plan and the waste policy and legislative changes that have occurred since the previous plan was published. Section 26 of the Waste Management Act 1996 as amended, sets out the overarching objectives for the National Hazardous Waste Management Plan. In this context, the following objectives are included as priorities for the revised Plan period: • To prevent and reduce the generation of hazardous waste by industry and society generally;	The revised Plan makes 27 recommendations under the following topics: • Prevention • Collection • Self-sufficiency • Regulation • Legacy issues • North-south cooperation • Guidance and awareness • Implementation	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
	• To maximise the collection of hazardous waste with a view to reducing the environmental and health impacts of any unregulated waste; • To strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export; • To minimise the environmental, health, social and economic impacts of hazardous waste generation and management.		framework for environmental protection and management.
Ministerial Guidelines such as Sustainable Rural Housing Guidelines and Flood Risk Management Guidelines	• The Department produces a range of guidelines designed to help planning authorities, An Bord Pleanála, developers and the general public and cover a wide range of issues amongst others, architectural heritage, child care facilities, landscape, quarries and residential density.	• The Minister issues statutory guidelines under Section 28 of the Act which planning authorities and An Bord Pleanála are obliged to have regard to in the performance of their planning functions.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
HSE Healthy Ireland Framework for Improved Health and Wellbeing 2013-2025	• The vision is: *"A Healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where wellbeing is valued and supported at every level of society and is everyone's responsibility."*	These four goals are interlinked, interdependent and mutually supportive: • Goal 1: Increase the proportion of people who are healthy at all stages of life • Goal 2: Reduce health inequalities • Goal 3: Protect the public from threats to health and wellbeing • Goal 4: Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Our Sustainable Future: A framework for Sustainable Development for Ireland 2012	A medium to long term framework for advancing sustainable development and the green economy in Ireland. It identifies spatial planning as a key challenge for sustainable development and sets a series of measures to address these challenges.	• Sets out the challenges facing us and how we might address them in making sure that quality of life and general wellbeing can be improved and sustained in the decades to come.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (2009)	• Outlines a policy for how a sustainable travel and transport system can be achieved. • Sets out five key goals: o To reduce overall travel demand. o To maximise the efficiency of the transport network. o To reduce reliance on fossil fuels. o To reduce transport emissions. o To improve accessibility to transport.	• Others lower level aims include: o reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment o ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking o improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies o strengthening institutional arrangements to deliver the targets	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Investing in our Future: A Strategic Framework for Investment in Land Transport (SFILT) – Department of Transport, Tourism and Sport	• SFILT sets out a set of priorities to guide the allocation of the State's investment to best develop and manage Ireland's land transport network over the coming decades.	The three priorities stated in SFILT are: • Priority 1: Achieve steady state maintenance (meaning that the maintenance and renewal of the existing transport system is at a sufficient level to maintain the system in an adequate condition); • Priority 2: Address urban congestion; and • Priority 3: Maximise the value of the road network. In delivering on the steady state maintenance objective set out in SFILT, the Plan includes for: • Planned replacement programme for the bus fleet operated under Public Service Obligation ("PSO") contracts; • Tram refurbishment and asset renewal in the case of light rail; and • To the extent within the Authority' remit, support for the operation of the existing rail network within the GDA.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020 (2007)	• White paper setting out a framework for delivering a sustainable energy future in Ireland. • Outlines strategic Goals for: o Security of Supply	The underpinning Strategic Goals are: • Ensuring that electricity supply consistently meets demand • Ensuring the physical security and reliability of gas supplies to Ireland • Enhancing the diversity of fuels used for power generation	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise.

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	o Sustainability of Energy o Competitiveness of Energy Supply	• Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks • Creating a stable attractive environment for hydrocarbon exploration and production • Being prepared for energy supply disruptions	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Adaptation Framework (NAF) 2018 and associated regional, local and sectoral adaptation plans	• NAF specifies the national strategy for the application of adaptation measures in different sectors and by local authorities in their administrative areas in order to reduce the vulnerability of the State to the negative effects of climate change and to avail of any positive effects that may occur	• Adaptation under this Framework should seek to minimise costs and maximise the opportunities arising from climate change. • Adaptation actions range from building adaptive capacity (e.g. increasing awareness, sharing information and targeted training) through to policy and finance-based actions. • Adaptation actions must be risk based, informed by existing vulnerabilities of our society and systems and an understanding of projected climate change. • Adaptation actions taken to increase climate resilience must also consider impacts on other sectors and levels of governance	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
2030 Climate and Energy Framework	Adopted October 2014, includes EU-wide targets and policy objectives for the period from 2021 to 2030.	Key targets for 2030: • At least 40% cut in greenhouse gas emissions (from 1990 levels). • At least 32% share for renewable energy. This was revised upwards in 2018. • At least 32.5% improvement in energy efficiency. This was revised upwards in 2018.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Renewable Energy Action Plan (2010)	• Sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.	Including Ireland's 16% target of gross final consumption to come from renewables by 2020.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Energy Efficiency Action Plan for Ireland (2009 – 2020)	• This is the second National Energy Efficiency Action Plan for Ireland.	• The Plan reviews the original 90 actions outlined in the first Plan and updates/renews/removes them as appropriate.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Energy & Climate Plan (NECP) 2021 – 2030	Irelands National Energy & Climate Plan (NECP) 2021-2030 takes into account energy and climate policies developed up to 2019, the levels of demographic and economic growth identified in the National Planning Framework - Project 2040 and includes all of the climate and energy measures as set out in the National Development Plan 2018-2027.	The planned policies and measures that were identified up to the end of 2019, collectively deliver a 30% reduction by 2030 in non-Emission Trading Systems greenhouse gas emissions (from 2005 levels). Ireland is committed to achieving a 7% annual average reduction in greenhouse gas emissions between 2021 and 2030. The NECP was drafted in line with the current EU effort-sharing approach, before the Government committed to this higher level of ambition, and therefore does not reflect this higher commitment. Ireland is currently developing those policies and measures and intends to integrate the revision of the NECP into the process which will be required for increasing the overall EU contribution under the Paris Agreement.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Wildlife Act of 1976 **Wildlife (Amendment) Act, 2000**	• The act provides protection and conservation of wild flora and fauna.	• Provides protection for certain species, their habitats and important ecosystems • Give statutory protection to NHAs • Enhances wildlife species and their habitats • Includes more species for protection	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

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			environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Actions for Biodiversity (2017-2021) Ireland's National Biodiversity Plan	• Sets out strategic objectives, targets and actions to conserve and restore Ireland's biodiversity and to prevent and reduce the loss of biodiversity in Ireland and globally.	• To mainstream biodiversity in the decision-making process across all sectors. • To substantially strengthen the knowledge base for conservation, management and sustainable use of biodiversity. • To increase awareness and appreciation of biodiversity and ecosystems services. • To conserve and restore biodiversity and ecosystem services in the wider countryside. • To conserve and restore biodiversity and ecosystem services in the marine environment. • To expand and improve on the management of protected areas and legally protected species. • To substantially strengthen the effectiveness of international governance for biodiversity and ecosystem services.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Broadband Plan (2012)	• Sets out the strategy to deliver high speed broadband throughout Ireland.	The Plan sets out: • A clear statement of Government policy on the delivery of High-Speed Broadband. • Specific targets for the delivery and rollout of high-speed broadband and the speeds to be delivered. • The strategy and interventions that will underpin the successful implementation of these targets. • A series of specific complementary measures to promote implementation of Government policy in this area.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Water Policy) Regulations of 2003 (SI 722 of 2003) **European Communities (Water Policy) Regulations of 2003 (SI 350 of 2014)** **European Communities Environmental Objectives (Surface waters) Regulations of 2009 (SI 272 of 2009)**	• Transpose the Water Framework Directive into legislation. • Outlines the general duty of public authorities in relation to water. • Identifies the competent authorities in charge of water policy (amended to Irish Water in 2013) and gives EPA and the CER the authority to regulate and supervise their actions.	• Requires the public to be informed and consulted on the Plan and for progress reports to be published on River Basin Districts (RBDs). • Implements a Register of protected areas, Classification systems and Monitoring programmes for water bodies. • Allows the competent authority to recover the cost of damage/destruction of status of water body. • Outlines environmental objectives and programme of measures and environmental quality standards for priority substances. • Outlines criteria for assessment of groundwater. • Outlines environmental objectives to be achieved for surface water bodies. • Outlines surface water quality standards. • Establishes threshold values for the classification and protection of surface waters against pollution and deterioration in quality.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities Environmental Objectives (Groundwater) Regulations of 2010 (SI 9 of 2010)	• Transpose the requirements of the Groundwater Directive 2006/118/EC into Irish Legislation.	• Outlines environmental objectives to be achieved for groundwater bodies of groundwater against pollution and deterioration in quality. • Sets groundwater quality standards. • Outlines threshold values for the classification and protection of groundwater.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Pollution Acts 1977 to 1990	• The Water Pollution Acts allow Local Authorities the authority regulate and supervise actions relating to water in their division.	The Water Pollution Acts enable local authorities to: • Prosecute for water pollution offences. • Attach appropriate pollution control conditions in the licensing of effluent discharges from industry, etc., made to waters. • Issue notices ("section 12 notices") to farmers, etc., specifying measures to be taken within a prescribed period to prevent water pollution. • issue notices requiring a person to cease the pollution of waters and requiring the mitigation or remedying of any effects of the pollution in the manner and within the period specified in such notices; • Seek court orders, including High Court injunctions, to prevent, terminate, mitigate or remedy pollution/its effects. • Prepare water quality management plans for any waters in or adjoining their functional areas.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Water Services Act 2007 **Water Services (Amendment) Act 2012** **Water Services Act (No. 2) 2013**	• Provides the water services infrastructure. • Outlines the responsibilities involved in delivering and managing water services. • Identifies the authority in charge of provision of water and waste water supply. • Irish Water was given the responsibility of the provision of water and waste water services in the amendment act during 2013, therefore these services are no longer the responsibility of the 34 Local Authorities in Ireland.	Key strategic objectives include: • Ensuring Irish Water delivers infrastructural projects that meet key public health, environmental and economic objectives in the water services sector. • Ensuring the provision of adequate water and sewerage services in the gateways and hubs listed in the National Spatial Strategy, and in other locations where services need to be enhanced. • Ensuring good quality drinking water is available to all consumers of public and group water supplies, in compliance with national and EU drinking water standards • Ensuring the provision of the remaining infrastructure needed to provide secondary waste water treatment, for compliance with the requirements of the EU Urban Waste water Treatment Directive. • Promoting water conservation through Irish Water's Capital Investment Plan, the Rural Water Programme and other measures. • Monitoring the on-going implementation of septic tanks inspection regime and the National Inspection Plan for Domestic Waste Water Treatment Systems. • Ensuring a fair funding model to deliver water services. • Overseeing the establishment of an economic regulation function under the CER.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan (2014-2016)	• This 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.	Six strategic objectives as follows: • Meet Customer Expectations. • Ensure a Safe and Reliable Water Supply. • Provide Effective Management of Waste water. • Protect and Enhance the Environment. • Support Social and Economic Growth. • Invest in the Future.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Raised Bog SAC Management Plan and Review of Raised Bog Natural Heritage Areas	• Aims to meet nature conservation obligations while having regard to national and local economic, social and cultural needs	• Ensure that the implications of management choices for water levels, quantity and quality are fully explored, understood and factored into policy making and land use planning. • Review the current raised bog NHA network in terms of its contribution to the national conservation objective for raised bog habitats and determine the most suitable sites to replace the losses of active raised bog habitat and high bog areas within the SAC network and to enhance the national network of NHAs.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Food Harvest 2020	• Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas.	• Seeks for the improvement of all agricultural sectors at all levels in terms of sustainability, environmental consideration and marketing development.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Agri-vision 2015 Action Plan	Outlines the vision for agricultural industry to improve competitiveness and response to market demand while respecting and enhancing the environment	not applicable	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Rural Environmental Protection Scheme (REPS) **Agri-Environmental Options Scheme (AEOS)** **Green, Low-Carbon, Agri-environment Scheme (GLAS)**	• Agri-environmental funding schemes aimed at rural development for the environmental enhancement and protection. • GLAS is the new replacement for REPS and AEOS which are both expiring.	• Establish best practice farming methods and production methods in order to protect landscapes and maximise conservation. • Protect biodiversity, endangered species of flora and fauna and wildlife habitats. • Ensure food is produced with the highest regard to the environment. • Implement nutrient management plans and grassland management plans. • Protect and maintain water bodies, wetlands and cultural heritage.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Rural Development Programme	The National Rural Development Programme, prepared by the Department of Agriculture, Fisheries and Food, sets out a national programme based on the EU framework for rural development and prioritises improving the competitiveness of agriculture, improving the environment and improving the quality of life in rural areas	At a more detailed level, the programme also: • Supports structural change at farm level including training young farmers and encouraging early retirement, support for restructuring, development and innovation; • Aims to improve the environment, biodiversity and the amenity value of the countryside by support for land management through funds such as Natura 2000 payments etc.; and • Aims to improve quality of life in rural areas and encouraging diversification of economic activity through the implementation of local development strategies such as non-agricultural activities	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Realising our Rural Potential: The Action Plan for Rural Development 2017	The Plan aims to unlock the potential of rural Ireland through a framework of supports at national and local level which will ensure that people who live in rural areas have increased opportunities for employment locally, and access to public services and social networks that support a high quality of life.	The Plan contains 276 actions across five key pillars. The five pillars are: • Supporting Sustainable Communities, • Supporting Enterprise and Employment, • Maximising our Rural Tourism and Recreation Potential, • Fostering Culture and Creativity in Rural Communities, and • Improving Rural Infrastructure and Connectivity.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Forestry Programme (2014-2020)	• Represents Ireland's proposals for 100% State aid funding for a new Forestry Programme for the period 2014 – 2020.	Measures include the following: • Afforestation and Creation of Woodland • NeighbourWood Scheme • Forest Roads • Reconstitution Scheme • Woodland Improvement Scheme • Native Woodland Conservation Scheme • Knowledge Transfer and Information Actions • Producer Groups • Innovative Forest Technology • Forest Genetic Reproductive Material • Forest Management Plans	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
River Basin Management Plan	• The River Basin Management Plan sets out the measures planned to maintain and improve the status of waters.	• Aim to protect and enhance all water bodies in the RBD and meet the environmental objectives outlined in Article 4 of the Water Framework Directive. • Identify and manages water bodies in the RBD. • Establish a programme of measures for monitoring and improving water quality in the RBD. • Involve the public through consultations.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Peatlands Strategy (2015-2025)	This Strategy aims to provide a long-term framework within which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations.	Objectives of the Strategy: • To give direction to Ireland's approach to peatland management. • To apply to all peatlands, including peat soils. • To ensure that the relevant State authorities and state-owned companies that influence such decisions contribute to meeting cross-cutting objectives and obligations in their policies and actions. • To ensure that Ireland's peatlands are sustainably managed so that their benefits can be enjoyed responsible. • To inform appropriate regulatory systems to facilitate good decision making in support of responsible use.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		• To inform the provision of appropriate incentives, financial supports and disincentives where required. • To provide a framework for determining and ensuring the most appropriate future use of cutover and cutaway bogs. • To ensure that specific actions necessary for the achievement of its objectives are clearly identified and delivered by those involved in or responsible for peatlands management or for decisions affecting their management.	
Flood Risk Management Plans arising from National Catchment Flood Risk Assessment and Management Programme	• The national Catchment Flood Risk Assessment and Management (CFRAM) programme commenced in Ireland in 2011 and is being overseen by the Office of Public Works. The CFRAM Programme is intended to deliver on core components of the National Flood Policy, adopted in 2004, and on the requirements of the EU Floods Directive.	CFRAM Studies have been undertaken for all River Basin Districts. The studies are focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. Flood Risk and Hazard mapping, including Flood Extent Mapping, was finalised in 2017. The final outputs from the studies are the CFRAM Plans, finalised in 2018. The Plans define the current and future flood risk in the River Basin Districts and set out how this risk can be managed.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft National Bioenergy Plan 2014 - 2020	The Draft Bioenergy Plan sets out a vision as follows: • Bioenergy resources contributing to economic development and sustainable growth, generating jobs for citizens, supported by coherent policy, planning and regulation, and managed in an integrated manner.	Three high level goals, of equal importance, based on the concept of sustainable development are identified: • To harness the market opportunities presented by bioenergy in order to achieve economic development, growth and jobs. • To increase awareness of the value, opportunities and societal benefits of developing bioenergy. • To ensure that bioenergy developments do not adversely impact the environment and its living and non-living resources.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft Renewable Electricity Policy and Development Framework (DCCAE) 2016	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Alternative Fuels Infrastructure for the Transport Sector (DTTAS) 2017- 2030	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: • AFV forecasts • Electricity targets • Natural gas (CNG, LNG) targets • Hydrogen targets • Biofuels targets • LPG targets • Synthetic and paraffinic fuels targets	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Food Wise 2025 (DAFM)	Food Wise 2025 sets out a ten-year plan for the agri-food sector. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential which exists for this sector to grow even further.	Food Wise 2025 identifies ambitious and challenging growth projections for the industry over the next ten years including: • 85% increase in exports to €19 billion. • 70% increase in value added to €13 billion. • 60% increase in primary production to €10 billion. • The creation of 23,000 additional jobs all along the supply chain from producer level to high-end value-added product development.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Cycle Network Scoping Study 2010	• Outlines objectives and actions aimed at developing a strong cycle network in Ireland • Sets out 19 specific objectives, and details the 109 actions, aimed at ensuring that a cycling culture is developed	• Sets a target where 10% of all journeys will be made by bike by 2020 • Proposes the planning, infrastructure, communication, education and stakeholder participations measures required to implement the initiative	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

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			environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030	• This National Policy Framework on Alternative Fuels Infrastructure for Transport represents the first step in communicating our longer-term national vision for decarbonising transport by 2050, the cornerstone of which is our ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable. • By 2030 it is envisaged that the movement in Ireland to electrically-fuelled cars and commuter rail will be well underway, with natural gas and biofuels developing as major alternatives in the freight and bus sectors.	This policy set out to achieve five key goals in transport: • Reduce overall travel demand • Maximise the efficiency of the transport network • Reduce reliance on fossil fuels • Reduce transport emissions • Improve accessibility to transport These goals remain the cornerstone of transport policy and are fully aligned to the objectives of this National Policy Framework.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Tourism Action Plan 2019-2021	The Tourism Action Plan 2019-2021 sets out actions that the Tourism Leadership Group has identified as priorities to be progressed until 2021 in order to maintain sustainable growth in overseas tourism revenue and employment. Each action involves specific tourism stakeholders, both in the public and private sectors, all of whom we expect to proactively work towards the completion of actions within the specified timeframe.	The Plan contains 27 actions focusing on the following areas: • Policy Context • Marketing Ireland as a Visitor Destination • Enhancing the Visitor Experience • Research in the Irish Tourism Sector • Supporting Local Communities in Tourism • Wider Government Policy • International Context • Co-ordination Structures	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Tourism Policy Statement: People, Place and Policy – Growing Tourism to 2025	The main goal of this policy statement is to have a vibrant, attractive tourism sector that makes a significant contribution to employment across the country; is economically, socially and environmentally sustainable; helps promote a positive image of Ireland overseas, and is a sector in which people want to work.	The Tourism Policy Statement sets three headline targets to be achieved by 2025: • Overseas tourism revenue of €5 billion per year • net of inflation excluding carrier receipts; • 250,000 people employed in tourism; and • 10 million overseas visitors to Ireland per year.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft Renewable Electricity Policy and Development Framework (DCCAE)	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála. Methodology: Development of the Policy and Development Framework is to be informed by the carrying out of an SEA, including widespread consultation with stakeholders and public, and with AA under the Habitats Directive.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Alternative Fuels Infrastructure for the Transport Sector (DTTAS) 2017- 2030	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: • AFV forecasts • Electricity targets • Natural gas (CNG, LNG) targets • Hydrogen targets • Biofuels targets • LPG targets Synthetic and paraffinic fuels targets	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
People Place and Policy - Growing Tourism to 2025, (DTTAS, 2014)	Growing Tourism to 2025 is a policy framework for the development of tourism within the Country.	The framework establishes the overall tourism goal of Government; • Employment in the tourism sector will be 250,000 by 2025, compared with around 200,000 at present. • There will be 10 million visits to Ireland annually by 2025. The Government's ambition is that overseas tourism revenue will reach €5 billion in real terms by 2025.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and

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			cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Waterways Ireland Heritage Plan 2016-2020	The overarching aim of the Plan is to: *"Identify and protect the unique waterways heritage and promote its sustainable use for the enjoyment of this and future generations".*	Four objectives of the Plan include the following: • Objective 1: Fostering partnerships to continue building waterway heritage knowledge through storing information, undertaking research and developing best practice. • Objective 2: Promoting awareness, appreciation and enjoyment of our waterway heritage with a focus on community engagement. • Objective 3: Promoting the integrated management, conservation, protection and sustainable use of the inland navigable waterway asset. • Objective 4: To develop Waterways Ireland as a heritage organisation committed to achieving the aim of this plan.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Tourism Development and Innovation – A Strategy for Investment 2016-2022, (Fáilte Ireland, 2016)	This strategy sets out the framework and mechanism for the delivery of investment to cities, towns, villages, communities and businesses across the country. It identifies priorities to support innovation in the sector to retain and grow the country's competitiveness in the marketplace. Its ultimate aim is to strengthen the appeal of Ireland for international visitors.	The objectives of the Tourism Development and Innovation Strategy are: • To successfully and consistently deliver a world class visitor experience; • To support a tourism sector that is profitable and achieves sustainable levels of growth and delivers jobs; • To facilitate communities to play an enhanced role in developing tourism in their locality, thereby strengthening and enriching local communities; and • To recognise, value and enhance Ireland's natural environment as the cornerstone of Irish tourism.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Aquaculture Acts 1997 to 2006 (Sea-Fisheries and Maritime Jurisdiction Act 2006 (8/2006), s. 1(3)) **Fisheries (Amendment) Act 1997 (23/1997)** **Fisheries and Foreshore (Amendment) Act 1998 (54/1998), ss. 2, 3 and 4** **Fisheries (Amendment) Act 2001 (40/2001)** **Sea-Fisheries and Maritime Jurisdiction Act 2006 (8/2006)**	The Aquaculture and Foreshore Management Division ensures the efficient and effective management of Aquaculture licensing and Foreshore licensing in respect of Aquaculture and Sea Fishery related activities.	The Strategic Objectives of the Aquaculture and Foreshore Management Division are: • to develop and manage an efficient and effective regulatory framework in respect of Aquaculture licensing and Foreshore licensing of Aquaculture and Sea Fishery related activities; • to secure a fair financial return from the State's foreshore estate in the context of Aquaculture licensing and Foreshore licensing in respect of Aquaculture and Sea Fishery related activities; to progressively reduce arrears in the clearing of licence applications.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Foreshore Acts 1933 to 2011	The Foreshore Acts require that a lease or licence must be obtained from the Minister for Housing, Planning and Local Government for the carrying out of works or placing structures or material on, or for the occupation of or removal of material from, State-owned foreshore, which represents the greater part of the foreshore. Construction of permanent structures on privately owned foreshore also required the prior permission of the Minister under the Foreshore Act.	• Developments on the foreshore require planning permission in addition to a Foreshore Lease/Licence/Permission. All Foreshore Leases, Licences • Permissions are without prejudice to the powers of the local planning authority. Applicants should, therefore, consult initially with the local planning authority regarding their proposal. • In the case of developments on foreshore for, by or on behalf of a Local Authority where an EIS is required, applications should be made to An Bord Pleanála under Part XV, Planning and Development Act 2000.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Marine Planning Development Management Bill (General Scheme), 2019	The Bill seeks to establish in law a completely new regime for the maritime area which will replace existing State and development consent regimes and streamline arrangements on the basis of a single consent principle.	One of the aims is to establish a legal basis for An Bord Pleanála and coastal local authorities to consent to development in the maritime area, while retaining existing foreshore and planning permission provisions for aquaculture and sea fisheries related development. It will also provide for a single environmental impact assessment (EIA) and a single appropriate assessment (AA), where applicable.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Seafood Operational Programme (2014-2020)	The Operational Programme (OP) supported by the European Maritime and Fisheries Fund (EMFF) in Ireland aims at achieving key national development priorities along with the EU's "Europe 2020" objectives. The OP supports the general reform of the EU's Common Fisheries Policy (CFP) and the development of its Integrated Maritime Policy (IMP) in Ireland.	The Irish OP is organised around the following priorities • Union Priority 1 (UP1): €67 million (28% of the total allocation) aim at assuring the sustainable development of fishing activities, while protecting the marine environment.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all

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	The OP strategy is designed around the Irish national priorities in the agri-food sector: 'Act Smart' by encouraging knowledge and innovation, 'Think Green' through a responsible and sustainable use of resources, 'Achieve Growth' in order to maintain and create jobs.	• Union Priority 2 (UP2): €30 million (12% of the total allocation) will support the Irish National Strategic Plan for Aquaculture that aims at boosting the competitiveness of the aquaculture sector. • Union Priority 3 (UP3): €84.8 million (35.4% of the total allocation) will go towards compliance with CFP rules regarding control and data collection. • Union Priority 4 (UP4): €12 million (5% of the total allocation) will support local development initiatives — a substantial, eleven-fold increase compared to the 2007-2013 funding period. • Union Priority 5 (UP5): €33 million (13.8% of the total allocation) will go towards creating scale in the Irish marketing and processing sectors, starting from the base of very small-scale businesses. • Union Priority 6 (UP6): €10.6 million (4% of the total allocation) will be used on measures to improve the knowledge on the state of the marine environment and the level of protection of marine areas.	environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Harnessing Our Ocean Wealth: An Integrated Marine Plan for Ireland 2012	Harnessing Our Ocean Wealth is an Integrated Marine Plan (IMP), setting out a roadmap for the Government's vision, high-level goals and integrated actions across policy, governance and business to enable our marine potential to be realised. Implementation of this Plan will see Ireland evolve an integrated system of policy and programme planning for our marine affairs.	• Sustainable economic growth of marine/ maritime sectors; • Increase the contribution to the national GDP; • Deliver a business friendly yet robust governance, policy and planning framework; • Protect and conserve our rich marine biodiversity and ecosystems; • Manage our living and non-living resources in harmony with the ecosystem; • Implement and comply with environmental legislation; • Building on our maritime heritage, strengthen our maritime identity; • Increase our awareness of the value, opportunities and societal benefits; and • Engagement and participation by all.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
All Ireland Pollinator Plan 2015-2020 and 2021-2025 (in preparation)	The All-Ireland Pollinator Plan is an island-wide attempt to reverse declines in pollinating insects in order to ensure the sustainability of our food, avoid additional economic impacts on agriculture, and protect the health of the environment. The main objectives include: • Making farmland, public land and private land in Ireland pollinator friendly; • Raising awareness of pollinators and how to protect them; • Managed pollinators – supporting beekeepers and growers; • Expanding our knowledge of pollinators and pollination service; and • Collecting evidence to track change and measure success.	• This voluntary Plan identified 81 actions, shared out between over 100 governmental and non-governmental organisations. • A large focus of the Plan is to identify actions to improve the quality and amount of flower-rich habitat. • Actions range from creating pollinator highways along our transport routes, to supporting pollinators on farmland, in gardens, businesses, and on public land.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Regional/ County/City/Local Level			
Southern Regional Economic and Spatial Strategy 2020-2032	The Regional Spatial and Economic Strategy provides a long-term strategic planning and economic framework for the Southern Region in order to support the implementation of the National Planning Framework.	The Southern Regional Economic and Spatial Strategy includes provisions for its nine constituent local authorities: Waterford City and County Council, Cork City Council, Cork County Council, Tipperary County Council, Wexford County Council, Kerry County Council, Clare County Council, Limerick City and County Council, Kilkenny County Council and Carlow County Council.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cork Metropolitan Area Strategic Plan (MASP)	MASP provides a guide for investment and sustainable development across the Cork Metropolitan Area up to 2031.	MASP reinforces Cork City's role as an international centre of scale to complement Dublin, targeting 50-60% population growth by 2040 to uniquely position Cork Metropolitan Area as: • A principal complementary location to Dublin with a strong international role; • A primary driver of economic and population growth in the region; • A Metropolitan Area strengthening the vibrancy of its City Centre; • A compact metropolitan area with increased regional connectivity; and • A City Region focusing growth on the delivery of sustainable transport patterns.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cork Metropolitan Area Transport Strategy (CMATS) 2040	CMATS sets out the delivery of a €3.5 billion investment in transport infrastructure.	The strategy provides for dramatic interventions in how the City moves with new dedicated walking/cycling routes, a high frequency bus service (BusConnects), the development of a light rail network, the expansion of commuter rail and investment in local route improvements including new orbital routes.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with

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			other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Integrated Implementation Plan 2019-2024	The priorities in the Integrated Infrastructure Plan align with the objectives and priorities set out in the Greater Dublin Transport Strategy 2016-2035, focused on improving public and sustainable transport. While the bulk of the Plan relates solely to the Greater Dublin Area, certain areas such as public transport services and activities related to small public service vehicles are dealt with on a national basis.	The Implementation Plan identifies investment proposals for a number of areas including: • Bus • Light Rail; • Heavy Rai; • Integration Measures and Sustainable Transport Investment; • Integrated Service Plan; and • Integration and Accessibility.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
NPWS Conservation Plans and/or Conservation Objectives for SACs and SPAs	Management planning for nature conservation sites has a number of aims. These include: • To identify and evaluate the features of interest for a site • To set clear objectives for the conservation of the features of interest • To describe the site and its management • To identify issues (both positive and negative) that might influence the site • To set out appropriate strategies/management actions to achieve the objectives	• Conservation objectives for SACs and SPAs (i.e. sites within the Natura 2000 network) have to be set for the habitats and species for which the sites are selected. • These objectives are used when carrying out appropriate assessments for plans and projects that might impact on these sites.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Groundwater Protection Schemes	A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater.	• A Groundwater Protection Scheme aims to maintain the quantity and quality of groundwater, and in some cases improve it, by applying a risk assessment-based approach to groundwater protection and sustainable development.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Land Use Plans (including Development Plans Local Area Plans) in force within Cork City and in adjoining planning authorities	• Outline planning objectives for land use development. • Strategic framework for planning and sustainable development including those set out in National Planning Framework and Southern Regional Economic and Spatial Strategy. • Set out the policies and proposals to guide development in the relevant area.	• Identify future infrastructure, development and zoning required. • Protect and enhances amenities and environment. • Guide planning authority in assessing proposals. • Aim to guide development in the area and the amount of nature of the planned development. • Aim to promote sustainable development. • Provide for economic development and protect natural environmental, heritage.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Local Economic and Community Plans (LECPs), including the Cork City LECP 2016-2021	The overarching vision for each LECP is: "to promote the well-being and quality of life of citizens and communities	The purpose of the LECP, as provided for in the Local Government Reform Act 2014, is to set out, for a six-year period, the objectives and actions needed to promote and support the economic development and the local and community development of the relevant local authority area, both by itself directly and in partnership with other economic and community development stakeholders.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cork City Landscape Study (2008) and Cork County Landscape Character Assessment	Characterises the geographical dimension of the landscape.	• Identifies the quality, value, sensitivity and capacity of the landscape area. • Guides strategies and guidelines for the future development of the landscape.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the

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			achievement of the objectives of the regulatory framework for environmental protection and management.
Cork City Heritage and Biodiversity Plan 2021 – 2026 [in preparation]	The overall aim of the Cork City Heritage and Biodiversity Plan is "to protect, enhance and promote the heritage and biodiversity of Cork city and to place the care of heritage at the heart of the community."	An action plan that sets out a series of realistic and practical actions to protect conserve and manage our heritage over the next five years and a methodology on the implementation of these actions. It will include actions on archaeology, built, cultural and natural heritage, as biodiversity is an integral part of all elements of heritage. The actions from this Heritage and Biodiversity Plan will strengthen Cork City's heritage and biodiversity and its economy, by supporting the tourism and the recreation sectors. The actions will also contribute to the health and wellbeing of our communities.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cork Agglomeration Noise Action Plan 2018 - 2023	Noise Action Plans are prepared in accordance with the requirements of the Environmental Noise Regulations 2006, Statutory Instrument 140 of 2006. These Regulations give effect to the EU Directive 2002/49/EC relating to the assessment and management of environmental noise. This Directive sets out a process for managing environmental noise in a consistent manner across the EU and the Noise Regulations set out the approach to meeting the requirements of the Directive in Ireland.	The main purpose of Noise Action Plans is to: Inform and consult the public about noise exposure, its effects and the measures which may be considered to address noise problems Address strategic noise issues by requiring competent authorities to draw up action plans to manage noise issues and their effects Reduce noise, where possible, and maintain the environmental acoustic quality where it is good	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cork City Council Climate Change Adaptation Strategy 2019-2024	The Strategy is developed around 7 key themes/goals: 1. Local Adaptation Governance and Business Operations; 2. Infrastructure and Built Environment; 3. Land Use and Development; 4. Drainage, Water and Flood Management; 5. Nature, Natural Resources and Cultural Infrastructure; 6. Citizen Safety, Health and Wellbeing; and 7. Partnerships with other Sectors and Agencies.	The Cork City Council Climate Change Adaptation Strategy 2019-2024 seeks to: • Ensure a proper comprehension of the key risks and vulnerabilities of climate change; • Bring forward the implementation of climate resilient actions in a planned and proactive manner; and • ensure that climate adaptation considerations are mainstreamed into all operations and functions of Cork City Council.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cork City Council's Sustainable Energy and Climate Action Plan (SECAP)	SECAP provides a baseline assessment of energy use and greenhouse gas emissions associated with energy use in Cork City (based on the year 2011 data and boundary).	The SECAP identifies ways to reduce energy related greenhouse gas emissions by 43.7% by 2030.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Southern Regional Waste Management Plan 2015-2021	These plans give effect to national and EU waste policy, and address waste prevention and management (including generation, collection and treatment) over the period 2015-2021.	To manage wastes in a safe and compliant manner, a clear strategy, policies and actions are required.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Fáilte Ireland Tourism plans, strategies, including those relating to the Wild Atlantic Way	Fáilte Ireland's work includes preparing various plans and strategies for Ireland's Wild Atlantic Way and other brands and initiatives. These plans are subject to their own environmental assessment processes and any project arising is required to be consistent with and conform with the provisions of all adopted/approved Statutory Policies, Strategies, Plans and Programmes, including provisions for the protection and management of the environment.	Some of Fáilte Ireland's plans and strategies include various projects relating to land use and infrastructural development, including those relating to development of land or on land and the carrying out of land use activities. Many of these projects exist already while some are not currently in existence. The Statutory Policies, Strategies, Plans and Programmes that provide for different projects undergo a variety of environmental assessments. These assessments ensure that environmental effects are considered, including: those arising from new and intensified uses and activities; and those arising from various sectors such as tourism.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Various existing, planned and emerging projects provided for by the above plans and programmes	These projects have been provided for by higher-level plans and programmes.	These projects will contribute towards the development of the area to which the Plan relates and/or wider area and will contribute towards environmental protection and management.	Where new land use developments or activities occur as a result of this legislation, plan, programme, etc., individually or in combination with others, potential in-combination effects (see Section 8.2) may arise. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.