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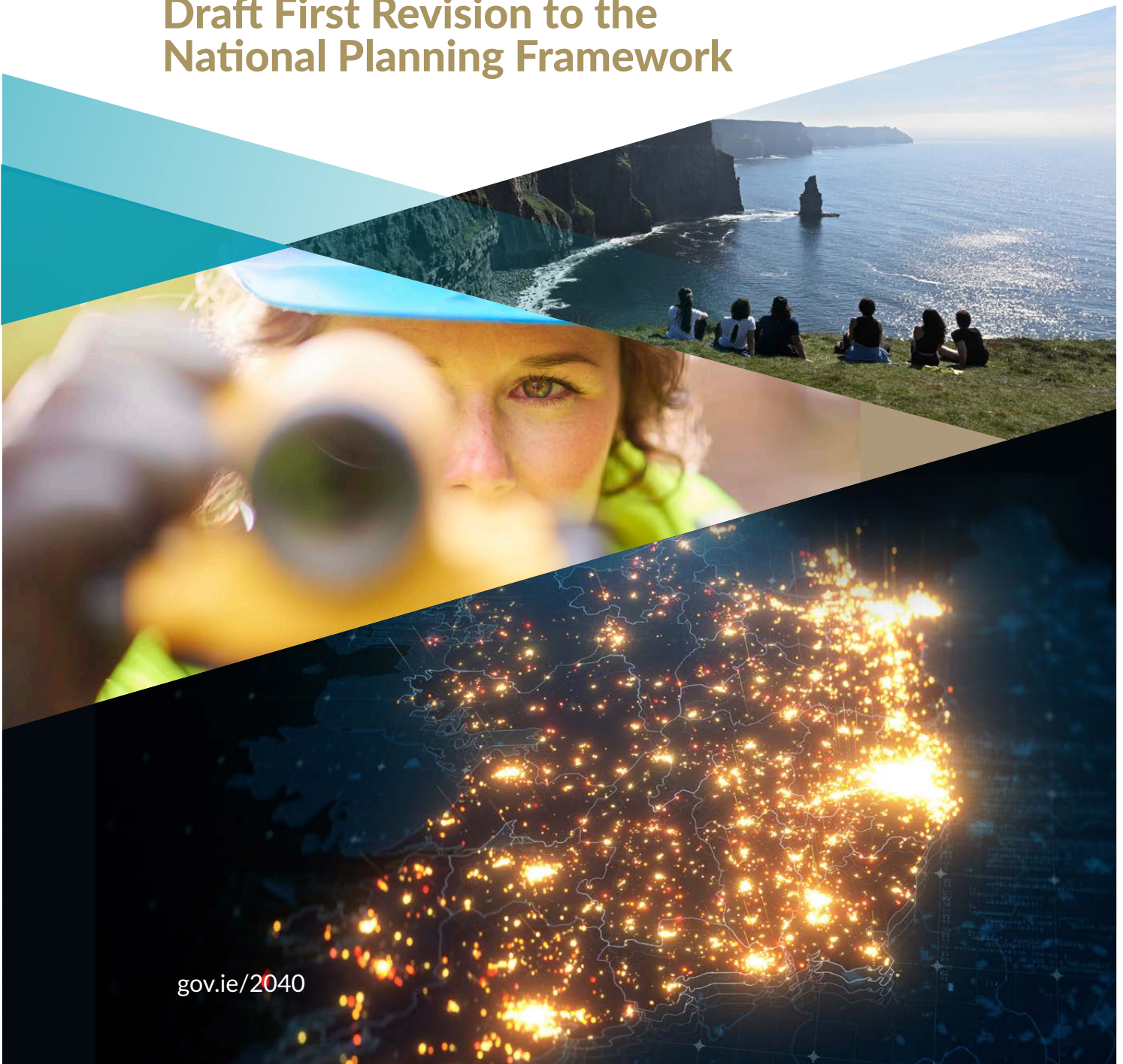


National
Planning
Framework

Strategic Environmental Assessment (SEA) Environmental Report

Project Ireland 2040

Draft First Revision to the
National Planning Framework



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Acronyms and Abbreviations

AA	Appropriate Assessment
ABP	An Bord Pleanála
BAT	Best Available Techniques
bgl	Below Ground Level
CAFE	Clean Air for Europe
CAP	Climate Action Plan
CARO	Climate Action Regional Office
CARP	Climate Action Regional Office
CDP	County Development Plan
CEA	Cumulative Effects Assessment
CFRAM	Catchment Flood Risk Assessment and Management
CGS	County Geological Site
CH	Cultural Heritage
CH ₄	Methane
CIÉ	Córas Iompair Éireann
CIEEM	Chartered Institute of Ecology and Environmental Management
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ eq	Carbon Dioxide Equivalent
cSAC	Candidate Special Area of Conservation
CSM	Conceptual Site Model
CSM RA	Common Safety Method for Risk Evaluation and Assessment
CSO	Central Statistics Office
DAFM	Department of Agriculture Food and the Marine
DART	Dublin Area Rapid Transit (IE's Electrified Network)
DAU	Development Applications Unit
dB	Decibel - unit of sound pressure level, calculated as a logarithm of the intensity of sound
DCCAE	Department of Communications, Climate Action and the Environment
DECC	Department of Environment, Climate and Communications
DEFRA	Department of Environment Food and Rural Affairs
DHLGH	Department of Housing, Local Government and Heritage
DHPLG	Department of Housing, Planning and Local Government
DP	Development Plan
DPER	Department of Public Expenditure and Reform
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMRA	Eastern and Midland Regional Assembly
EM RSES	Eastern and Midland Regional Spatial and Economic Strategy
EMU	Electrical Multiple Unit
EN	Euro Norm (European Standard)
EN	European Engineering Standard
EOP	Environmental Operating Plan
EPA	Environmental Protection Agency
EPD	Environmental Product Declaration

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EPO	Emerging Preferred Option
ERM	National Transport Authority's Eastern Regional Model
FRA	Flood Risk Assessment
GHS	Geological Heritage Site
GWB	Groundwater Body
GWDTE	Groundwater Dependent Terrestrial Ecosystems
ha	Hectare (one ha equal to 10,000 square meters)
HA	Hydrometric Area
HAS	Health and Safety Authority
HSE	Health Service Executive
IAS	Invasive Alien Species
IAQM	Institute of Air Quality Management
IFI	Inland Fisheries Ireland
IPCC	Intergovernmental Panel on Climate Change
IPH	Institute of Public Health
I-WeBS	Irish Wetland Bird Survey Site Inventory
km	Kilometre(s)
Kt CO ₂ eq	Kiloton Carbon Dioxide Equivalent
LA	Local Authority
LAP	Local Area Plan
LAQM	Local Air Quality Management
LCA	Landscape Character Assessment
m	Metre
m ³	cubic metres
MASP	Metropolitan Area Spatial Plan
MHLGH	Minister for Housing, Local Government and Heritage
N ₂ O	Nitrous Oxide
NBAP	National Biodiversity Action Plan
NBDC	National Biodiversity Data Centre
NECP	National Energy and Climate Plan
NH ₃	Ammonia
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NIS	Natura Impact Statement
NMS	National Monuments Service
NO ₂	Nitrogen dioxide
NO _x	Nitrogen Oxides
NPF	National Planning Framework
NPWS	National Parks and Wildlife Services
NSO	National Strategic Outcomes
NTA	National Transport Authority
OPW	Office of Public Works
OSI	Ordnance Survey Ireland
PAHs	Polycyclic Aromatic Hydrocarbons
PM	Particulate Matter
PM _{2.5}	Fine Particulate Matter (aerodynamic diameter < 2.5 microns)

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PM10	Particulate Matter (aerodynamic diameter < 10 microns)
pNHA	proposed Natural Heritage Areas
RBMP	River Basin Management Plan
RPS	Record of Protected Structures
RSES	Regional Spatial & Economic Strategy
SAC	Special Areas of Conservation
SCI	Special Conservation Interest (of a Special protection Area)
SDG	Sustainable Development Goal
SFRA	Strategic Flood Risk Assessment
SI	Statutory Instrument
SO2	Sulphur Dioxide
SPA	Special Protection Area
SSFRA	Site-Specific Flood Risk Assessment
SUDS	Sustainable Urban Drainage System
SuDS	Sustainable Drainage Systems
UG	Underground
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WFD	Water Framework Directive
WHO	World Health Organisation

1 Introduction

This Environmental Report has been prepared as part of the Strategic Environmental Assessment (SEA) of the draft first revision of the National Planning Framework (NPF), (hereafter also referred to as the 'draft Plan'). This report has been prepared in accordance with the requirements of EU and national legislation on the assessment of the effects of certain plans and programmes on the environment.

The NPF is the Government's high-level strategic plan for shaping the future growth and development of Ireland out to the year 2040. The NPF was published in 2018 and has since been significantly influenced both by the evolution of planning policy at national, regional, and local levels, and development patterns and trends across the country.

The Planning and Development Act 2000 (as amended) under Section 20C, requires the Government to either revise, replace or state why the Government has decided not to revise, every six years after the publication of the NPF. The Government decided in June 2023 to undertake a revision to the NPF, in recognition of the need to account for particular changes which have taken place since 2018 which require consideration in the context of potential amendments to the current framework.

The Department of the Housing, Local Government and Heritage (DHLGH) is leading the preparation of the draft first revision to the NPF on behalf of Government with input from other departments and agencies which themselves are tasked with developing land-use planning policy. The purpose of this inclusive approach is to allow shared national development goals, including competitiveness and environmental sustainability, to be more broadly considered with the intention of providing greater clarity for all stakeholders. The DHLGH is also the competent Authority for the purposes of the SEA process.

The purpose of this SEA Environmental Report is to:

- Inform the development of the draft first revision to the NPF;
- Identify describe and evaluate the likely significant effects of the draft first revision to the NPF and its reasonable alternatives; and
- Provide an early opportunity for the statutory authorities and the public to offer views on any aspect of this Environmental Report and accompanying draft first revision to the NPF documentation, through consultation.

This Environmental Report has been prepared by RPS on behalf of the DHLGH and reflects the outputs of an iterative assessment process which spanned December 2023 and July 2024.

2 Contents and Main Objectives of the Draft First Revision to the NPF

2.1 Background

In 2018, the National Planning Framework (NPF) replaced the National Spatial Strategy as the overall spatial planning and development strategy for Ireland. The NPF, together with the National Development Plan, combine to form Project Ireland 2040, the overarching policy and planning framework for the social, economic and cultural development of Ireland. Since the publication of the NPF in 2018 there have been a number of significant developments in relation to planning policy, guidance and legislation, as well as governance and institutional change.

In addition to the statutory mandate to update the NPF, there is also a Programme for Government (PfG) commitment to update the NPF in 2024. To achieve this, Government published A Road Map for the First Revision of the National Planning Framework in June 2023¹, setting out what had changed, the public engagement and environmental assessment to be undertaken to support the revision and the steps needed to inform the scope of the first revision. Two key elements feeding into the revision are the new CSO 2022 census data released and the outputs from an Expert Group convened by the Minister of HLGH to identify matters to be considered in the first revision to the NPF. This in turn fed into an Issues Paper prepared to inform discussion with stakeholders.

A programme for delivering the first revision to the NPF was identified with completion anticipated by the end of Q1 2024. However, in March 2024, the Government agreed to the deferral of the approval of a revised NPF until September 2024 under section 20C 5(b) of the Planning and Development Act 2000, as amended².

2.1.1 Census 2022

The results of Census 2022 indicated that the population increased by 8.1% compared with the 2016 census and there were 5,149,139 people in the State on 3rd April 2022. This is the first time that a census has recorded a population of more than five million people since 1851. The results indicated that the national population growth was broadly in line with the overall NPF population projections as the first NPF projected a population of just over 5.1m people in Ireland in 2022 and the Census indicated 5.15m people.

2.1.2 Expert Group Report

In 2023, an Expert Group was convened by the Minister for Housing, to provide a high-level overview of the NPF, published in 2018, and to identify matters to be considered in the first revision to the NPF. The Report³ examined the overall approach of the NPF in the face of the evolving trends which had developed over the intervening five years since the NPF was launched in 2018. Key drivers of change included climate transition, regional development, demographic change, and digitalisation as well as immigration due to external factors such as the war in Ukraine and increased number of people seeking international protection under EU International Protection Directive (2011/95/EU) and other geo-political activity.

In undertaking this review, the Expert Group concluded that the original NPF had remained a strong policy framework with relevance in the face of key drivers of change. However, it acknowledged three broad areas where further strengthening would be needed, notably:

- Targets should be critically reviewed and consideration given to making them more ambitious and more clearly defined;

¹ www.gov.ie/pdf/

² DHLGH, 2024. Statement from Government - 5 March 2024. Available at: <https://www.gov.ie/en/press-release/b7288-statement-from-department-of-housing-local-government-and-heritage/>

³ [Report of Expert Group for the First Revision of the National Planning Framework](#)

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- The bodies involved and their roles in the implementation of the NPF should be clarified and strengthened in the first revision (particularly in relation to the Metropolitan Area Strategic Plans) and mechanisms put in place for more detailed measurement and monitoring of the progress on implementation of the NPF First Revision; and
- There should be greater coordination at whole-of-government level across all infrastructure projects (including the infrastructure projects supported by the National Development Plan (NDP)) and new efforts made to generate broader support for national spatial planning across all of society.

The Expert Group Report proposed 13 recommendations addressing the broad areas for strengthening the plan. These recommendations are included in **Table 2-1**.

Table 2-1: Recommendations from Expert Group Review of Effectiveness of NPF

Ref.	Recommendations
1	The revision to the NPF should explore ways of making the five Metropolitan Area Strategic Plans more effective. This is key to ensuring that all Irish city-regions live up to their potential as European cities of scale.
2	The revision to the NPF should critically review the current targets and consider stronger and more ambitious targets for compact growth.
3	The revision to the NPF should consider the inherent unsustainability of scattered, uncoordinated patterns of new houses in the countryside and explore how to develop a new national strategic objective to direct new rural housing towards rural towns and villages and to restrict new urban-generated rural housing elsewhere.
4	The revision to the NPF should seek to name the principles for identifying priority locations for the deployment of infrastructure at a strategic scale across the country.
5	The revision to the NPF should explore ways of recognising the specific planning challenges that can occur within natural, geographical or transboundary sub-regions and of embedding this broader range of spatial entities within the scope of spatial planning.
6	The revision to the NPF should consider ways in which the concept of Spatial Equity proofing could be brought forward for strategic planning in Ireland.
7	The revision to the NPF should consider principles that would strengthen the link between the locations of new workplaces with its compact growth objectives
8	The revision to the NPF should consider a systematic evaluation of the National Strategic Outcomes and the National Policy Objectives to ensure that outcomes and objectives are clear and support consistent implementation.
9	The revision to the NPF should consider the establishment of a dedicated unit which would monitor implementation of the NPF annually. The unit should be mandated to require all relevant Departments and relevant organisations (e.g., Local Authorities and Uisce Éireann) to report progress and report publicly on their performance against clear metrics, both investment (including the NDP) and impact metrics. The monitoring unit should also identify challenges in the implementation process.
10	The revision to the NPF should consider clarification of the roles of all key National, Regional and Local Bodies to support the implementation of the NPF and to ensure alignment between the NPF and National, Regional and Local Plans, including County Development Plans.
11	The revision to the NPF should consider the benefits of establishing a cross-departmental implementation group at the centre of government which would systematically prioritise and co-ordinate decisions in relation to all key infrastructure decisions, including the NDP projects and programmes.
12	The revision to the NPF should consider whether a Spatial Planning Council, with a membership from relevant professions and academic institutions, should be established to bring information to civic society that would broaden our understanding of the societal benefits of better national spatial planning in Ireland. Consideration should also be given to whether a consultative forum could contribute to this process by starting a national conversation on national spatial planning.
13	The revision to the NPF should consider how the very strong enthusiasm for planning and sustainable development that is found in local community groups, businesses, civil society, and development bodies across the country might be supported and harnessed. This would help and to foster inclusive dialogue about strategic planning initiatives at all spatial scales.

2.2 Issues Paper

Published in October 2023, the *Issues Paper*, having had regard to the recommendations of the Expert Group and the evidence base provided by the Census 2022 reporting identified the strategic policy issues for the draft first revision to the NPF under the following headings:

- **Climate Transition and our Environment** - Since the publication of the NPF in 2018, the acceleration of the climate crisis has prompted an urgent response in the form of coordinated and targeted action. The revision to the NPF will consider issues of housing, employment, health, education facilities and amenities required by the growing population, along with the infrastructure required to support development in order to ensure sustainable development for our planet and future generations.
- **Population and Demographics** - The Economic and Social Research Institute (ESRI) work undertaken for the NPF in 2018 indicated that Ireland's population will grow by around one million additional people, to almost 5.7 million people by 2040. The current NPF involves planning for growth in each of Ireland's three regions as follows: Eastern and Midland Region an additional 490,000 - 540,000 people; Northern and Western Region an additional 160,000 - 180,000 people; and Southern Region an additional 340,000 - 380,000 people. The ESRI are currently undertaking demographic and econometric modelling work, taking account of the results of the 2022 Census, to update previous research on structural housing demand and produce an updated range of scenarios for long-run new household demand in Ireland.
- **Regional Growth and Ambition** - The NPF in 2018 recognised that continued investment in Dublin and the east would be critical to support the future growth of Dublin as an international city of scale in the national interest. At the same time the need for regional balance was also recognised, alongside compact growth objectives in five key cities. Consideration will be given to the targets for the regions and the cities as part of the revision, accounting for any regional development challenges and the opportunities related to the attractiveness and strengths of Ireland's three regions – for example housing, infrastructure, foreign direct investment (attraction) and enterprise development.
- **Compact Growth** – The Report of the Expert Group included a series of recommendations in relation to compact growth, including a review of the current targets and consideration for more ambitious targets given the overarching climate objectives. The draft first revision to the NPF will consider the acceptance of compact growth among the public, targets for growth and monitoring of targets going forward.
- **Digitalisation** - Small and medium-sized enterprises (SMEs) constitute the vast majority of businesses in Ireland. Planning policy which supports this sector to meet the challenges of digitalisation can make a significant contribution to the achievement of balanced regional development by enabling firms to drive productivity and innovation, open doors to new markets, and better understand and respond to their customers' needs. A proactive plan-led approach can help tackle regional disparities and prevent the creation of a two-speed economy characterised by pockets of digital exclusion and inequality of opportunity.
- **Investment and Prioritisation** - In addressing a number of the recommendations of the Expert Review Group, the draft first revision to the NPF will explore ways of strengthening the aligning of NPF/NDP interaction in the area of: Project Selection and Prioritisation; Institutional Arrangements – Roles and Responsibilities; Monitoring and Reporting; and Better Data.

2.3 Main Objectives of the Draft First Revision to the NPF

Fundamentally, the proposed first revision to the NPF is building on the vision commenced in 2018, holding firm on the broad strategy of balanced regional development, clustered and compact growth, and improved connectivity. However, it is also seeking to update the Framework based on the changes to social, economic and legislative drivers over the last 5-years and adapt to existing and new pressures relating to housing, provision of services, biodiversity loss and climate change.

The updated vision will be achieved by:

- Continuing to develop a region-focused strategy for managing growth;
- Linking this to the established Project Ireland 2040 National Development Plan;
- Using the range of public and private lands available for certain strategic purposes;

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- Supporting this with strengthened, more environmentally focused planning at local level; and
- Backing the framework up in law, with oversight by the independent Office of the Planning Regulator which has been providing oversight since it was established in 2019.

2.4 Proposed Revisions to the NPF

The key areas of change to the NPF are set out below.

Demographic Change: Since the publication of the NPF and the subsequent NPF Roadmap, the results of Census 2022 have been published and the ESRI has been commissioned to update the demographic and econometric projections to inform the NPF Revision. The population of Ireland was 5.15m at the most recent Census in 2022 (CSO), an increase of around 0.4m people over the previous, 2016 Census. The ESRI draft projection is that the population will increase to around 5.7m by 2030 and 6.1m by 2040. The core objectives of balanced regional development and compact growth are proposed to be maintained, including the objective of delivering 50% of future population growth in the Northern and Western and Southern Regions combined, to act as a counter-balance to the Eastern and Midland Region.

The proposed Revision is to the NPF targets, on a largely pro-rata basis throughout Ireland, additional projected population growth to 2030, in line with the current NPF strategy approach. This will effectively mean more targeted growth everywhere to 2030, including for the four Regional Cities as key elements of strategy.

New Sustainable Communities: Planned growth in the metropolitan area would be targeted towards the delivery of new sustainable communities at brownfield and greenfield locations in the principal city and suburbs areas and in the wider metropolitan areas focused on opportunities arising from existing and planned major public transport investment, along planned high capacity public transport corridors and in accordance with the principles of Transport Orientated Development.

Balanced Regional Development: The NPF in 2018 recognised that continued investment in Dublin and the east is critical to support the future growth of Dublin as an international city of scale in the national interest, but that this needs to be supported by a more balanced distribution of growth across all of Ireland's regions. Census 2016 indicated a 70/30 split in population growth between the EMRA area and the rest of the country whereas Census 2022 shows population growth split of approximately 55/45.

The proposed Revision to the NPF will maintain the objective of a 50:50 split of growth between the EMRA and the NWRA/SRA Regions.

City-Focused Growth: The city-focused growth strategy in the NPF is based on growth targets for the cities of Cork, Limerick, Galway and Waterford, relative to their historic growth rates, with each projected to grow by at least 50% by 2040. The proportion of national population growth achieved in the five cities was 124,543 persons or just 32% of overall growth. Census 2022 shows a very mixed performance for the regional cities—only Waterford (+12%) and Limerick (+8%) had a growth rate above the national average of 8.1%. Both Galway and Cork grew at a rate below the national average. To achieve the ambitious NPF growth targets to 2040, each of these cities would need to see growth rates in excess of 10% each intercensal period and this remains a key element of the NPF strategy approach.

The proposed Revision to the NPF will maintain the targets for the cities; with the focus being on the need for enhanced mechanisms to support delivery in the revised strategy.

Compact Growth: The compact growth policy approach of the NPF addresses the need for a more sustainable form of development in Ireland's cities and towns in response to an identified need to counter the trend of urban sprawl, to support the targeted delivery of infrastructure services, to promote cities and towns to be self-sustaining and viable places to live and work. NPF National Policy Objectives 8 and 9 established a target to deliver at least half (50%) of all new homes that are targeted in the five Cities and suburbs and at least 30% of all new homes that are targeted in settlements other than the five Cities and their suburbs, within their existing built-up footprints. Examining data for housing completions in 2022, the average rate across all counties was c.60% of development taking place within settlement boundaries.

The proposed Revision to the NPF will not include an increase in compact growth targets. However, greater clarity is provided in relation to the definition of 'built up area' and there is commitment to a monitoring system that will track implementation of the targets in a consistent way for all major settlements and this will facilitate potential consideration of amended targets in future revisions.

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Climate Transition and Environment: There has been significant development in national climate policy since the adoption of the NPF and this is reflected in new and enhanced policy approaches proposed as part of the emerging approach to the Revision.

The proposed Revision to the NPF will include new policies in relation to renewable energy development, including the allocation of regional renewable electricity capacity allocations in order to facilitate the accelerated roll-out and delivery of renewable electricity infrastructure for on-shore wind and solar generation development and to support the achievement of the national targets set out in the Climate Action Plan 2024. The proposed Revision to the NPF will continue to promote the need to respond to known flood risks in plan-making, and highlights potential for nature-based solutions to assist with drainage and reduce risks of flooding. The likelihood of risks arising from rising sea levels in terms of coastal areas is also reflected as is the value of green and blue infrastructure.

Transport: The proposed Revision to the NPF reflects updated national transport policy with a particular focus on the principles of ‘avoid, shift and improve’. Specific projects and studies are referenced including the *All Island Strategic Rail Review* (2023) and key road projects that are essential for improving regional and intra urban connectivity, in particular a number of important upgrades in the north-west border area (N2/A5). Emerging national policy developments relating to Sustainable Mobility Policy and Transport Orientated Development are overtly supported. The important role of cycling is also highlighted, with particular emphasis on the implementation of the *National Cycle Network Plan* (2024).

Working with our Neighbours: The 2018 NPF reflects on the ongoing cooperation and collaboration that exists between Ireland and Northern Ireland. The United Kingdom has since left the European Union.

The proposed Revision to the NPF sets out objectives for strategic cooperation and investment for mutual benefit on the island of Ireland. These include objectives for transport connectivity; health, education, investment in research and innovation as well as reference to the PEACEPLUS programme, which is a major driver for cross-border investment and cooperation over the next number of years.

Investment and Funding: The proposed Revision to the NPF identifies key strategic investments needed under each of the 10 National Strategic Outcomes to support the NPF strategy.

Implementation: Institutions and Delivery: The proposed Revision to the NPF signals a need to consider institutional and governance reforms in order to support more balanced regional and city-focused growth and to harness capacities at regional and local levels to deliver on regional and local objectives e.g. an enhanced role for the Land Development Agency (LDA) in order to support the development of new sustainable communities.

3 Strategic Environmental Assessment Methodology

3.1 SEA Methodology

This chapter provides a description of the methodology applied to implement the SEA process (including legislation, current best practice and guidance) to the draft first revision to the NPF. The principal sources of guidance, including government circular used in the SEA process are presented in **Appendix A**.

3.2 The SEA Process

The SEA Directive 2001/42/EC requires that certain plans and programmes, including policy statements, which are likely to have a significant impact on the environment, be subject to the SEA process. The SEA process is broadly comprised of the following steps as outlined in **Table 3-1**.

Table 3-1: SEA Stages

SEA Stage	Purpose	Status
Screening	The purpose of this stage of the process was to reach a decision, on whether or not an SEA of the draft Policy Statement was required.	DHLGH undertook SEA Screening in 2023 and determined that SEA of the draft first revision to the NPF would be required. See Section 3.2.1 .
Scoping and statutory consultation	The purpose of this stage of the process was to clarify the scope and level of detail to be considered in the environmental assessment. This was undertaken in consultation with the defined statutory bodies for SEA in Ireland and other stakeholders. Transboundary consultation was undertaken with the relevant authorities in Northern Ireland. This stage was also informed by the outcome of a review of monitoring from the 2018-2023 NPF.	This stage was completed in Q4 2023. See Section 3.2.2 .
Environmental assessment and consultation	The purpose of this stage of the process was to assess the likely significant impacts on the environment as a result of implementation of the draft first revision to the NPF and consideration of reasonable alternatives. The output from this stage of the process is an SEA Environmental Report which records this assessment. Consultation on the draft first revision to the NPF and Environmental Report are also part of this stage.	This stage has been iterative as the draft Plan has evolved. Between December 2023 and July 2024.
SEA Statement	The purpose of this stage of the process is to identify how environmental considerations and consultations have been integrated into the final first revision to the NPF, as well as consideration of alternatives and inclusion of an updated monitoring programme, culminating in the production of an SEA Statement.	To be published with the final first revision to the NPF in Q4 2024.

3.2.1 Screening Stage

The SEA Directive applies to plans and programmes which are (i) prepared or adopted by a national, regional or local level and (ii) required by legislative, regulatory or administrative provisions. Under the Planning and Development Act 2000, as amended, Section 20C requires the Government to either revise, replace or state why the Government has decided not to revise, every 6 years after the publication of the NPF.

Mandatory SEA is required for plans and programmes that are prepared for certain specified sectors, notably town and country planning or land use, and which set the framework for future development consent of projects listed in Annexes I and II to the EIA Directive. Having regard to the above, it was determined by the EU and International Planning Regulation (EUIPR) Unit of the DHLGH on behalf of the Minister for the HLGH that the draft first revision to the NPF would be subject to SEA on a mandatory basis under Article 3(2)(a) of the SEA Directive.

3.2.2 Scoping and Statutory Consultation Stage

3.2.2.1 Geographic Scope

The NPF is a national level document and is intended to give context to lower-level plans including the Regional, Spatial and Economic Strategies (RSES), City and County Development Plans and Local Area Plans (**Figure 3.1**). As such, its geographic scope is focussed on primarily terrestrial-based activities occurring at the national to regional scale. The NPF does not, in general, have a spatial element, however, some of the revisions specify a particular location or call for the development of specific infrastructure. Recognition has also been given within the Environmental Report and the draft first revision to the NPF to spatial planning in Northern Ireland, particularly in the context of cross-border place making and coastal / marine planning to consider transboundary effects, where appropriate.



Figure 3.1: Ireland's Planning Policy Hierarchy⁴

3.2.2.2 Temporal Scope

In line with the SEA Directive, short, medium and long-term impacts (including reference to secondary, cumulative, synergistic, permanent and temporary, positive and negative effects) have been considered during the assessment of the draft first revision to the NPF. The recommendations put forward in the NPF and this revision have a longer perspective and may take a number of years / cycles to be realised and to take full effect. As a result, the time lines for assessment of long-term impacts extend beyond the timeframe of the actual plan. For the purpose of the SEA, a short-term horizon of 2030, a medium-term horizon of 2030 to 2050 and a long term horizon of beyond 2050 have been considered.

3.2.2.3 Environmental Scope

The SEA scoping process considered whether the environmental effects, both positive and negative, of the draft first revision to the NPF were likely to be significant, in accordance with S.I. 436/2004, as amended. The environmental scope considered the following environmental factors should be scoped in: biodiversity, population, human health, fauna, flora, soil, geology, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

The DHLGH, as the competent authority for the SEA process, is required to consult specific environmental authorities on the scope and level of detail of the information to be included in the Environmental Report. consultation was undertaken with:

⁴ Office of the Planning regulator (ORP) 2022. Planning Leaflet 1 Introducing the Planning System.

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- Environmental Protection Agency (EPA);
- Department of the Environment, Climate and Communications (DECC);
- Department of Agriculture, Food and the Marine (DAFM); and
- Department of the Housing, Local Government and Heritage (DHLGH).

In parallel, consultation was also undertaken with the Department of Agriculture, Environment and Rural Affairs (DAERA) Northern Ireland.

To facilitate scoping consultation, two key approaches were undertaken. In the first instance, a Scoping Report was issued to the statutory environmental authorities for SEA and DAERA for a four-week consultation period from 7th November 2023 to 6th December 2023. Seven consultation responses were received from the EPA. A summary of written comments received and how they have been addressed in the SEA and draft First Revision to the NPF are provided in **Appendix B**.

Subsequently, a Scoping Workshop was held at the Custom House in Dublin on 21st November 2023 from 2-5pm. The workshop was intended to bring a wider group of stakeholders together to inform discussions on scope and level of detail for the SEA and to discuss environmental issues relating to the draft first revision to the NPF. A total of 31 stakeholders attended along with representatives from DHLGH and RPS. The attendees were divided into smaller discussion groups and discussed three topic areas as follows:

1. What environmental impacts / constraints should be considered in the SEA for the draft NPF First Revision?
2. What reasonable alternatives should be considered for the draft NPF First Revision
3. What other relevant plans and programmes should be considered in the SEA and in preparation of the draft NPF First Revision?

A list of stakeholders in attendance, a summary of feedback received and how they have been addressed in the SEA and draft First Revision to the NPF are provided in **Appendix C**.

3.2.3 Environmental Assessment

3.2.3.1 Assessment Approach

SEA as its name suggests, is set at a strategic level therefore it is not possible for the baseline environment to be described and the plan assessed in as much detail as could be done for a project-level environmental impact assessment.

SEA instead uses a system of broad environmental topics listed in the SEA Directive to group large environmental datasets, e.g. human health, air quality, land and soils etc. in order to rationalise information. These datasets form the basis of the description of the baseline and identification of existing environmental problems relevant to the plan (see Chapter 5 for further details).

Each of the environmental topics is assigned at least one high-level Strategic Environmental Objective (SEO) against which the assessment can be made. The SEO specifies a desired direction for change (e.g. reduce greenhouse gas emissions) against which the future impacts of the draft first revision to the NPF can be assessed. Although not explicit on the assessment approach in SEA, Annex II of the SEA Directive presents criteria for determining the likely significant effects of a plan. The significance of effects is determined with reference to the type and nature of the draft Plan, the nature of the effects and the sensitivity of the receiving environment as well as the magnitude and spatial extent of the effects. The environmental assessment includes a combination of qualitative and quantitative assessment and expert judgement. The SEO and the framework for the assessment of alternatives and the preferred alternative is presented in further detail in **Chapter 6**.

3.2.3.2 SEA Environmental Report

This Environmental Report complies with the requirements of the Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) as implemented in Ireland through the European Communities (Environmental Assessment of Certain Plans and Programmes)

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Regulations (S.I. No. 435/2004) as amended. Based on the legislation and guidance, the Environmental Report must include the information outlined in **Table 3-2**.

Table 3-2: Requirements of the SEA Directive and Relevant Section of Environmental Report

Requirement of SEA Directive (Article 5(1) Annex I)	Chapter of ER
An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes.	Chapter 2: Content and Main Objectives of the Plan Chapter 4: Review of Relevant Plans and Programmes
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme.	Chapter 5: Relevant Aspects of the Current State of the Environment (Baseline)
The environmental characteristics of areas likely to be significantly affected.	Chapter 5: Relevant Aspects of the Current State of the Environment (Baseline)
Any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or the Habitats Directive.	Chapter 5: Relevant Aspects of the Current State of the Environment (Baseline)
The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation.	Chapter 4: Review of Relevant Plans and Programmes
The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	Chapter 8: Assessment of the Preferred Scenario
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme, or modification to a plan or programme.	Chapter 9: Mitigation and Monitoring
An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter 7: Consideration of Alternatives
A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme	Chapter 9: Mitigation and Monitoring
A non-technical summary of the information provided under the above headings	Non-technical Summary

3.2.4 SEA Statement

The main purpose of the SEA Statement is to provide information on the decision-making process and to document how environmental considerations, i.e. the views of consultees and the recommendations of the Environmental Report, have been taken into account in the first revision to the NPF. The SEA Statement will illustrate how decisions were taken, making the process more transparent, including consideration of alternatives and will include the SEA monitoring programme.

The SEA Statement for the final first revision to the NPF will be compiled after the statutory consultation on the draft first revision to the NPF and Environmental Report has been completed, and once the first revision to the NPF has been finalised.

3.3 Appropriate Assessment (AA)

The EU Habitats Directive places strict legal obligations on Member States to ensure the protection, conservation and management of the habitats and species of conservation interest. Article 3 of the Directive introduces the concept of a “coherent European ecological network of special areas of conservation” titled Natura 2000. This network includes sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II and furthermore includes special protection areas pursuant to Directive 79/409/EEC [codified as 2009/147/EC] (the Birds Directive).

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Article 6 of the Directive obliges Member States to undertake an ‘appropriate assessment’ (AA) for any plan or project which may have a likely significant effect on a Natura 2000 site. The outcomes of such AA fundamentally affect the decisions that may lawfully be made by competent national authorities in relation to the approval of plans or projects.

Article 6(3) states:

Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) states:

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

The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000, as amended, and the European Communities (Birds and Natural Habitats) Regulations 2011, as amended 2021.

The first revision to the NPF is not directly connected to the conservation of any Natura 2000 site. However, the NPF is a national plan that sits at the top of the planning hierarchy and guides the spatial planning and spatial coherence for lower tier plans, therefore it has the potential to impact on habitats and species for which Special Areas of Conservation (SAC) and Special Protection Areas (SPA) have been designated under the Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC) respectively. Furthermore, it has an important role as a top tier plan to reflect EU and national policy in relation to biodiversity including the articulation of no net loss biodiversity targets.

Based on the Government’s Road Map (June 2023), the Ecological Assessment Unit (EAU) of the NPWS in the DHLGH gave early consideration to the requirement for AA under Directive 92/43/ EEC (Habitats Directive) as transposed into Irish legislation and concluded AA would be required. A formal determination on the first revision to the NPF was then made by the EAU in which it was concluded that AA of the first revision to the NPF would be required and a Natura Impact Statement (NIS) should be prepared.

3.4 Strategic Flood Risk Assessment (SFRA)

The objective of the SFRA is to ensure that flood risk is a key consideration in delivering strategic sustainable land-use planning decisions, particularly with regard to increasing resilience and promoting adaptation of existing and proposed assets, including transport, housing, commercial and service assets. The SFRA provides an assessment of all types of flood risk within a national context to assist DHLGH to make informed strategic planning decisions in respect of the first revision to the NPF in accordance with the *Planning System and Flood Risk Management Guidelines for Planning Authorities*.⁵

3.5 Data Gaps / Difficulties Encountered

- The National Landcover Map (2023), prepared by Tailte Éireann in partnership with the Environmental Protection Agency (EPA), is not yet publicly available.
- Central Statistics Office (CSO) Place of Work - Census of Anonymised Records (POWCAR) data is not publicly available.

⁵ *The Planning System and Flood Risk Management Guidelines for Planning Authorities*, November 2009’ [DEHLG (renamed as DHLGH) / OPW] and Circular PL02/2014 (August 2014) referred to hereafter as ‘The Guidelines’.

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- The SEA for the draft first revision to the NPF was completed against a backdrop of legal challenge to the NPF 2018-2023.⁶ A determination on the legal challenge was not available during preparation of this SEA, however direction has been taken from the opinion of Advocate General Kokott published in March 2024.

No other specific data limitations or difficulties were encountered during the SEA process.

⁶ Friends of the Irish Environment CLG v. The Irish Government Case and Others C-727/22.

4 REVIEW OF RELEVANT PLANS AND PROGRAMMES

4.1 Introduction

The NPF is a national level document which must implement the environmental protection objectives established at European and international levels. It must also align with, as well as contribute to, the goals of a range of other national level plans and programmes, notably those relating to water, biodiversity and climate in particular.

The NPF is also intended to give context to lower-level plans and programmes and set the framework under which the lower tier plans and programmes will evolve including the Regional, Spatial and Economic Strategies (RSES), City and County Development Plans (CDPs) and Local Area Plans (LAPs) (**Figure 4.1**) Supporting each successive layer of the hierarchy is a cascading series of opportunities for SEA and AA to be applied as greater detail on locations and specific actions and activities crystallises. These lower tier plans must implement the environmental protection objectives established at the national level.



Figure 4.1: Ireland's Planning Policy Hierarchy

4.2 Methodology

The consideration of other plans and programmes commenced during the scoping phase when an initial list was included in the Scoping Report and discussion with the environmental authorities. Subsequently stakeholders invited to the Scoping Workshop (see **Section 3.2.2**) were asked to identify other plans and programmes they felt were relevant. Also at the workshop, discussion topic 3 related to other relevant plans and programmes that should be considered in the SEA and in preparation of the draft first revision to the NPF. The suggested plans, and others considered relevant have been considered in the following sections.

In order to set a framework for exploring the relationship between the draft first revision to the NPF and key plans/ programmes the following two questions were considered:

- Does the draft first revision to the NPF contribute to the fulfilment of environmental protection objectives set in other key plans/programmes?
- To what degree are the environmental protection objectives/measures set in these other key plans/programmes impacted by the draft first revision to the NPF?

4.3 Relationship of the NPF and Other Plans and Programmes

4.3.1 Spatial Planning

The **National Development Plan (NDP)** and the **National Planning Framework (NPF)** together make up 'Project Ireland 2040'. These documents are at the top of the spatial planning hierarchy (see Figure 4-1) in Ireland and are the Government's high-level plan for the future of sustainable development in Ireland. These documents set land use policies at the national level, as it is necessary to make choices about how we balance growth with more sustainable approaches to development and land use by examining how planning policy can help shape national infrastructural decisions. The NPF is given full statutory effect under the Planning and Development (Amendment) Act 2018 which sets out the legislative process not only for its preparation but also its monitoring and cyclical review. A proposed Planning and Development Bill (2023) is also currently in development. The Bill, when enacted will introduce a new planning policy hierarchy which will pave the way for a new national planning policy statement to set policy and provide related guidance regarding planning matters.

The NDP sets out the Government's over-arching investment strategy and budget for the period 2021-2030 with a record spending of €165 billion. The plan aims to ensure that the investment strategy supports the

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spatial planning under NPF. It also aims to ensure a sustainable and regionally balanced post- pandemic recovery recognising the challenges with population growth (approximately 1 million people between 2016 and 2040), Covid-19, Brexit, housing issues, health and the climate emergency.

At the regional level, the **three Regional Spatial and Economic Strategies (RSES's)** are informed by Project Ireland 2040, as well as the economic and other relevant policies of the government. The RSESs provide the roadmap for effective regional development and support the delivery of the National Policy Objectives (NPOs) contained in the NPF at the regional level, and to inform lower-level planning (such as County Development Plans). An RSES is a strategic plan which identifies regional assets, opportunities and pressures and provides appropriate policy responses in the form of Regional Policy Objectives. At this strategic level the RSES's provide a framework for investment to better manage spatial planning and economic development to sustainably grow the three regions to 2031 and beyond.

In Northern Ireland, regional spatial policy is directed through the Regional Development Strategy (RDS) 2035 (published 2012) which provides an overarching strategic planning framework influencing spatial development for Northern Ireland. It informs the spatial aspects of the strategies of all government departments. It complements the Strategic Planning Policy Statement document (published 2015) which aims for consistent land development in Northern Ireland. It should be recognised that Northern Ireland accounts for approx. 27% of Ireland's all-island population. The draft first revision to the NPF outlines key areas for practical co-operation between departments and local authorities in both Ireland and Northern Ireland.

The draft first revision to the NPF directly contributes to the fulfilment of the lower tier spatial plans and sets the framework for the environmental protection objectives/measures integrated into these plans. Alignment with the Northern Ireland spatial policy is essential particularly where we have shared waters.

4.3.2 Sustainable Development

Since 2015, Ireland has been a signatory to the **United Nations Sustainable Development Goals (SDGs)**, which frame national agendas and policies to 2030 (**Figure 4.2**). These goals are mirrored through EU strategies such as Europe 2020 and the European Regional Development Fund which emphasise smart, sustainable, and inclusive growth. While some of the goals are clearly related to the NPF, such as Goal 11 Sustainable cities and Communities, it is clear that all 17 have some relevance to a greater or lesser degree.



Figure 4.2: United Nations Sustainable Development Goals (Source: United Nations)

In October 2022, DECC published the **second SDG National Implementation Plan 2022-2024** which sets out the objectives, actions, and measures required to increase Ireland's ambition and strengthen implementation structures to achieve the Sustainable Development Goals. The SDG plan includes five strategic objectives which are directly relevant to the draft First Revision to the NPF (it is noted that the draft First Revision to the NPF includes policy references to achievement of the SDGs):

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- Strategic Objective 1: To embed the SDG framework into the work of Government Departments to achieve greater Policy Coherence for Sustainable Development;
- Strategic Objective 2: To integrate the SDGs into Local Authority work to better support the localisation of the SDGs;
- Strategic Objective 3: Greater partnerships for the Goals;
- Strategic Objective 4: To further incorporate the principle of Leave No One Behind into Ireland's Agenda 2030 implementation and reporting mechanisms; and
- Strategic Objective 5: Strong reporting mechanisms.

The **8th Environmental Action Programme to 2030** entered into force in 2022 to reiterate the EU's long-term vision to 2050 of living well, within planetary boundaries. It sets out priority objectives for 2030 and the conditions needed to achieve these. Building on the European Green Deal, the action programme aims to speed up the transition to a climate-neutral, resource-efficient economy, recognising that human wellbeing and prosperity depend on healthy ecosystems. There are six priority objectives to 2030, all of which have direct relevance to the draft First Revision to the NPF:

- Achieving the 2030 greenhouse gas emission reduction target and climate neutrality by 2050;
- Enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change;
- Advancing towards a regenerative growth model, decoupling economic growth from resource use and environmental degradation, and accelerating the transition to a circular economy;
- Pursuing a zero-pollution ambition, including for air, water and soil and protecting the health and well-being of Europeans;
- Protecting, preserving and restoring biodiversity, and enhancing natural capital;
- Reducing environmental and climate pressures related to production and consumption (particularly in the areas of energy, industry, buildings and infrastructure, mobility, tourism, international trade and the food system).

The **EC Zero Pollution Action Plan for Water, Air and Soil** was published in 2021. The main objective of this action plan is to provide a compass for including pollution prevention in all relevant EU policies, maximising synergies in an effective and proportionate way, stepping up implementation and identifying possible gaps or trade-offs. To steer the EU towards the 2050 vision of a "Healthy Planet for All", this action plan sets key 2030 targets to speed up pollution reduction. It also sets out key actions for 2021-2024 to complement the many relevant actions in other European Green Deal initiatives, including the Chemicals Strategy for Sustainability. This action plan therefore sets out a broad sustainability and environmental action agenda for Europe across key areas, which recognises the 'triple planetary threat' of climate change, pollution and biodiversity loss. This is directly relevant to the draft First Revision to the NPF.

4.3.3 Climate and Energy

The **Kyoto Protocol** was adopted in December 1997, Kyoto Protocol binds industrialised countries and economies in transition to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets. The **United Nations Framework Convention on Climate Change (UNFCCC)** under this protocol seeks that countries party to the protocol adopt policies and measures on mitigation and report the progress periodically. The Protocol's 2008-2012 commitment period expired, and thereafter the **Doha Amendment to the Kyoto Protocol** was agreed to, which established new commitments for the period 2013–2020.

The UNFCCC entered into force on 21 March 1994 and the primary aim of UNFCCC is to stabilise GHG concentrations at a level that will help prevent dangerous human interference with the climate system. It states that "*such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner.*" The **Conference of the Parties (COP)** is the decision-making body of the UNFCCC. A key task is to review emissions inventories submitted by countries and assess the effectiveness of measures and progress. **COP 21** was held in Paris in 2015. It resulted in adoption of Paris Agreement that specifies the long-term temperature goal to keep the rise in mean global temperature to well below 2 °C above pre-industrial levels, and preferably limit the increase to 1.5 °C, recognising that this would substantially reduce the effects of climate change. Emissions need to be reduced

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as soon as possible and reach net zero by 2050. It has been anticipated that in order to stay below 1.5 °C of global warming, emissions need to be cut by 50% by 2030. The most recent COP, **COP 28** was held in Dubai in December 2023. The primary objective of COP 28 alongside the review of the Paris Agreement terms, was the production of the first Global Stocktake (GST) to allow countries to adapt their next climate action plans. The four themes at the forefront of discussion included: fast-tracking the energy transition; fixing climate finance; nature, people, lives, and livelihoods; and inclusivity in climate management.

The **European Green Deal** is the EU's long-term growth strategy which aims to make Europe climate-neutral by 2050 and put renewable energy at the heart of the energy system. As part of the Green Deal, with the **European Climate Law (Regulation (EU) 2021/1119)**, the EU has set itself a binding target of achieving climate neutrality by 2050. As an intermediate step towards climate neutrality, the EU has raised its 2030 climate ambition, committing to cutting emissions by at least 55% by 2030. The EU is working on the revision of its climate, energy and transport-related legislation under the so-called 'Fit for 55 package' in order to align current laws with the 2030 and 2050 ambitions.

The **EU 2030 Climate and Energy Framework (2014)** sets out targets and measures to make the EU's economy and energy systems more competitive, secure, and sustainable. It sets out binding targets relating to GHG emissions, renewables, and energy efficiency to be met by each Member State by 2030 of:

- At least 40% cut in greenhouse gas emissions (from 1990 levels);
- At least 32% share for renewable energy; and
- At least 32.5% improvement in energy efficiency.

A review clause by 2023 allows for a potential upward revision of the EU level target. The agreement on the 2030 framework, specifically the EU domestic GHG reduction target of at least 40%, forms the basis of the EU's contribution to global climate change. The 2020 EU Effort Sharing Decision target commits Ireland to reducing emissions from those sectors that are not covered by the emissions trading scheme (e.g., agriculture, transport, residential, non-energy intensive industry, commercial services, and waste) to 20% below 2005 levels.

The **Renewable Energy Directive [RED] (EU 2018/2001) (recast to 2030, RED II)** entered into force in December 2018 and set a target of at least 32% for renewable energy, at EU-wide level, by 2030. A further revision, **RED III (Directive (EU) 2023/2413)**, part of the Fit for 55 Package, has increased the target for the EU's renewable energy to 42.5% by 2030; this directive sets specific targets for Member States in the industry, transport, and building sectors.

The **Fit for 55 Package** comprises a set of proposals to revise and update EU legislation and includes for new initiatives with the overall aim of ensuring that EU policies are in line with the Council and the European Parliament's climate goals of reducing net GHG emissions by at least 55% by 2030. It includes for an update to the **Emissions Trading Scheme (ETS)** with new provisions such as extension to cover maritime emissions and a revision of rules applying to the aviation sector. The changes to the EU ETS have now been agreed under **Directive 2023/959** (amending Directive 2003/87/EC and Decision (EU) 2015/1814) and were to be implemented in national regulation by December 31, 2023, at the latest.

The Package also includes for a suite of new rules, revisions and targets across many aspects, including: a social justice fund; a carbon border adjustment mechanism, which targets imports of products in carbon-intensive industries, to operate in parallel with the ETS; new rules to increase the EU-level GHG emissions reduction target for 2030 from 29% to 40%; a binding EU commitment to reduce emissions and increase removals from LULUCF with binding national targets for each Member State; CO₂ emissions standards for vans and cars; reducing methane emissions in the energy sector; a provisional agreement on sustainable aviation fuels (SAFs – advanced biofuels and electrofuels) via the **ReFuel Aviation** proposal; a provisional deal on new rules for decarbonised fuels in shipping via the **FuelEU** maritime initiative; new rules under the **Alternative Fuels Infrastructure Regulation (AFIR)**, which includes for charging stations to be installed every 60 km and hydrogen fuel refuelling stations; revision of the RED (RED III); new rules to accelerate energy efficiency and the energy performance of buildings (new buildings should be zero-emission by 2030 and existing buildings transformed into zero-emission buildings by 2050); a hydrogen and decarbonised gas market package; and a proposal to revise the directive on the taxation of energy products and electricity.

The **REPowerEU Plan** is focused on rapidly reducing the European Union's reliance on Russian fossil fuels by progressing the clean energy transition and fostering increased collaboration throughout and across Member States to create a more resilient European energy system. REPowerEU expands the 'Fit for 55' proposals by setting forward additional actions to save energy by reducing demand and consumption,

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diversify energy sources and supplies, accelerate fossil fuel substitution, and improve investment frameworks facilitating reforms, faster permitting, and innovation.

The EU **Green Deal Industrial Plan** was published in 2023 to enhance the competitiveness of Europe's net-zero industry and support the fast transition to climate neutrality with an ambition for EU manufacturing capacity for net-zero technologies to reach at least 40% of expected EU demand by 2030. One of the pillars of this is the **Net-Zero Industry Act** (NZIA) which has broad agreement at EU level and will aim to build a strong manufacturing capacity of clean technologies, to support the creation of green, quality jobs as the EU seeks to reach climate neutrality by 2050. As a central part of the Green Deal Industrial Plan, the Act will ensure the EU is well-equipped for the clean energy transition by establishing a benchmark for EU manufacturing capacity for net-zero technologies to reach at least 40% of expected EU demand by 2030. The agreed Act will create the favourable regulatory conditions necessary to attract and support investment in technologies and related projects that will make a significant contribution to decarbonisation. The agreed provisions will in particular help build more production facilities of net-zero technologies, in a faster manner. It will facilitate access to markets for products that meet European sustainability and resilience criteria and that help to diversify from over-concentrated supply sources. It will also ensure that the necessary skilled workforce is available to support the race to net-zero.

The **EU Adaptation Strategy 2021** outlines a long-term vision for the EU to become a climate-resilient society, fully adapted to the unavoidable impacts of climate change by 2050. This strategy aims to reinforce the adaptive capacity of the EU and the world and minimise vulnerability to the impacts of climate change, in line with the Paris Agreement and the **European Climate Law** which writes into law the goal set out in the European Green Deal. The law recognises adaptation as a key component of the long-term global response to climate change and requires Member States and the Union to enhance their adaptive capacity, strengthen resilience and reduce vulnerability to climate change. It also introduces a requirement for the implementation of national strategies. The three main objectives of this Strategy include improving knowledge and managing uncertainty; supporting policy development at all levels and all relevant policy fields; and speeding up adaptation implementation.

At national level, the **National Policy Position on Climate Action and Low Carbon Development (2014)** 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.

The **Climate Action and Low Carbon Development Act 2015** facilitates the approval of plans for Ireland in relation to climate change to aid the transition to a low carbon, climate resilient and environmentally sustainable economy by the end of 2050. In line with this objective, a national mitigation plan and national adaptation framework were required to be produced by the Minister to the Government for approval. The **Climate Action and Low Carbon Development (Amendment) Act 2021** further strengthens the governance framework on climate action, and through this Act, Ireland has:

- Set economy-wide carbon budgets and sectoral emission ceilings (SECs) for the periods 2021-25 and 2026-30;
- Established pathways to deliver the SECs, incorporating 26 MtCO₂eq. in unallocated emissions savings for the second carbon budget period; and
- Defined a delivery approach through specific measures and actions to meet emissions ceilings, which are estimated to require €119 bn in capital investment between 2022-2030.

The 2021 Act places the national climate objective of achieving, by no later than 2050, the transition to a climate resilient, biodiversity-rich, environmentally sustainable, and climate-neutral economy, on a statutory footing. The 2021 Amendment Act also replaced the 2015 Act's requirement for a National Mitigation Plan with a requirement for the preparation of an annual update to the Climate Action Plan and to prepare, not less frequently than once every five years, a national long term climate action strategy.

The first Climate Action Plan of 2019 (CAP19) was formulated on a non-statutory basis. It set out many measures, key objectives and targets to address the climate change agenda. There have since been two updates building on the 2019 plan – the first in 2021 (CAP21) which set out a wide range of policies aimed at decarbonisation in relation to the particular sectors of the economy, and the second in 2022 (CAP23). The DECC is required to publish an update to the CAP annually. The **Climate Action Plan 2024 (CAP24)** will therefore form the latest update of the CAP, building upon the measures and actions of CAP23. The draft

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CAP24 at present outlines the actions required to 2035 and beyond to achieve the ambition of halving Ireland's GHG emissions by the end of the decade and aiming for carbon neutrality by 2050.

The 2021 Act also requires local authorities to prepare **Local Authority Climate Action Plans (LACAPs)** and formal instruction was issued by the Minister of the DECC in February 2023 to all local authorities (LAs) to prepare their plans, with guidelines prepared to assist LAs in their preparation. These plans will help ensure that the national climate objective can be achieved through all levels of the planning hierarchy, from the Climate Action Plan, down through the RSEs and Regional Renewable Electricity Strategies, and through the LACAPs.

The **Long-term Strategy on Greenhouse Gas Emissions Reductions** was published in July 2023 as part of the actions proposed under CAP23 and as a requirement under the Climate Action and Low Carbon Development (Amendment) Act 2021. This strategy sets out indicative pathways, beyond 2030, towards achieving carbon neutrality for Ireland by 2050. A long-term strategy is also a requirement of the **Regulation on the governance of the energy union and climate action (EU) 2018/1999**.

First published in 2018, the **National Adaptation Framework (NAF)** contained Ireland's strategy for the application of climate adaptation measures to reduce the vulnerability of the State to the negative effects of climate change, and to seek opportunities for any positive effects that may occur. The NAF was reviewed in line with the requirements of the Climate Action and Low Carbon Development Act 2015-2021 and a new NAF was adopted and published in June 2024.

Twelve **Sectoral Climate Change Adaptation Plans** were published between 2019 and 2020 in line with the first NAT and Climate Action Plan 2019. These sectoral plans identified the key risks faced across sectors including agriculture, biodiversity, built and archaeological heritage, transport infrastructure, electricity and gas networks, communications, flood risk management, water quality and services infrastructure and health. The plans detail the approach being taken to address these risks and build climate resilience for the future. The next iteration of the Sectoral Adaptation Plans will need to be reviewed and developed in line with the new NAF 2024.

The **EU Just Transition Fund (EUJTF)** comprises Pillar 1 of the **European Union Just Transition Mechanism**. The aim of the fund is to assist in the transition to a climate neutral economy for territories that are most affected by climate action objectives. **Ireland's Territorial Just Transition Plan** and associated Programme was approved by Cabinet and the European Commission (EC) in November 2022. It incorporates €84.5 million of funding from the EU Just Transition Fund for 2021-2027, and the Programme will provide for investments of up to €169 million, which will be targeted at the economic transition of the Midlands region for the period to 2027, under Ireland's first such territorial plan, the **Just Transition Plan for the Midlands Region**; this plan sets out the impacts on this region as a result of the ending of peat extraction for energy production and identifies the development needs and priorities for the territory in order to address these impacts.

The **National Retrofit Plan** was first published as a part of the Climate Action Plan 2021, setting out how the government will deliver on retrofit targets. The plan is designed to address barriers to retrofit across four key pillars: driving demand and activity; financing and funding; supply chain, skills and standards; and governance. For each pillar, barriers were identified, and time-bound policies, measures and actions were put in place to address them.

The preparation of **National Energy and Climate Plans (NECP)** by EU Member States was introduced by the **Regulation on the governance of the energy union and climate action (EU) 2018/1999**. Ireland prepared its first **NECP 2021-2030** to incorporate all planned policies and measures that were identified up to the end of 2019, and which collectively aim to deliver a 30% reduction by 2030 in non-ETS greenhouse gas emissions (from 2005 levels). Key objectives of the NECP are set out under the five pillars of the EU 2018 Regulation: Decarbonisation and Renewable Energy; Energy Efficiency; Energy Security; Internal Energy Markets; and Research, innovation and competitiveness. An update to the NECP is currently being prepared with the aim of submitting a final plan to the EC in Q2 2024.

EirGrid's Strategy 2020-2025 is a strategy which is predominantly shaped by climate change and the transition of the electricity sector to low-carbon, renewable energy generation and transmission. The main aim of this strategy is to transform the power system for future generations by phasing out coal, peat and oil-based generation in the next decade and implementing new technologies that will allow the consumers to generate and store power and return any surplus to the grid.

Transmission and distribution of electricity impacts energy efficiency resulting in a percentage of lost power. Producing renewable electricity can be more advantageous if the retention of that energy is sustained as much as possible over various distances. These challenges can be attenuated by grid upgrades. EirGrid's

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Transmission Development Plan 2021-2030 builds on their preceding policy, the Grid Implementation Plan 2017-2022. Both of which support the continued development of a safe secure and reliable transmission system in Ireland and identifies, at a strategic level, key developments in the transmission system to take place over the next few years and highlights. One of its key strategy statements to ensure a balanced approach to grid development is consideration of all practical technology options.

Energy Security in Ireland to 2030 outlines a new strategy to ensure energy security in Ireland for this decade, while ensuring a sustainable transition to a carbon neutral energy system by 2050. This energy security package sets out a strategic approach to ensure a secure transition for Ireland's energy systems in line with its climate objectives. It considers lessons, in particular, from the disruption to European energy supplies following the invasion of Ukraine and the domestic capacity shortfall experienced in the electricity sector. Six key pillars of analysis underpin the overall response and recommendations which are presented in Energy Security in Ireland to 2030, including a public consultation, and a range of external reviews and analyses which are published alongside the Energy Security Package. A follow-up to the Energy Security Package will be published in 2030, and every five years thereafter, with implementation monitored by the Government's Energy Security Group.

The draft first revision to the NPF has regard to climate change and recognises the need for climate action, and articulates a national strategic objective related to climate (NSO 8). The draft first revision to the NPF also acknowledges the various changes that climate change brings, including flood risk and changes to climatic patterns, which is relevant to adaptation planning and infrastructure/built environment development and resiliency planning. The policies and measures developed in the various climate and energy plans and programmes include development and infrastructural measures (e.g., renewable energy development, grid development, agricultural activities and diversification, forestry activities, modal shift and active travel measures etc.) which have the potential to impact on land use changes and development of new infrastructure/facilities which has specific relevance for the draft first revision to the NPF. In addition, the annual updates to the Climate Action Plan contain specific measures to mitigate and adapt to the effects of climate change across various sectors.

4.3.4 Biodiversity

Ireland is a party to the **UN Convention on Biological Diversity** and thus committed to biodiversity conservation. The measures include conservation of ecosystems, habitats, and species in their natural surroundings both inside and outside protected areas, conservation of the components of biological diversity outside their natural habitats and impact assessment.

At European level, a corner stone of biodiversity protection is the **EU Habitats Directive (92/43/EEC)** and the **EU Birds Directive (2009/179/EC)**. Together this legislation sets out the environmental protection objectives for European sites with a focus on achieving maintaining / restoring favourable conservation status and ensuring protection of those features that support the designations.

The **EU Biodiversity Strategy to 2030** aims to put Europe's biodiversity on the path to recovery by 2030 for the benefit of people, climate, and the planet. Following the COVID-19 pandemic, this updated policy aims to build resilience to future threats, including climate change, security of food supplies, forest fires, outbreaks of disease and combating the illegal trade in wildlife. Furthermore, there is an intention to increase the Natura 2000 network which will put forward a proposal for an EU restoration plan. Implementation will be assisted by better tracking of progress, improving knowledge transfer, and emphasising 'respect for nature' in public and business decision-making.

The **EU Nature Restoration Law** aims to address the severe decline in biodiversity across the EU and to return ecosystems to good conservation condition. The rules set a binding target at EU-level where member states will have to enact restoration measures that cover at least 20% of land and sea areas of the EU by 2030. For those ecosystems that require restoration, measures must be put in place by 2050. This law was recently adopted at EU level and will require Member States to prepare plans over the next 2 years.

At national level, the vision for biodiversity in 2050 as stated in the **fourth National Biodiversity Action Plan 2023-2027** is one where "*Biodiversity in Ireland is valued, conserved, restored and sustainably used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people*".

The **National Peatlands Strategy 2015-2025** sets out a cross-governmental approach to managing issues that relate to peatlands, including compliance with relevant national and international environmental legislation, agreements, plans and policies; climate change; forestry; water quality; flood control; energy; nature conservation and restoration; land use planning; and agriculture. Mid-term review of this strategy was

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conducted in 2021 and 16 actions were refined taking into account developing national policies and programmes related to peatlands. It also includes all the peatland related actions proposed under Climate Action Plan 2021 and regarding peatlands proposed under 2020 Programme for Government to maximise the benefits for biodiversity.

The National Parks and Wildlife Service (NPWS) are also published the **National Raised Bog SAC Management Plan** which outlines the approach to be taken specifically for the conservation and management of the 53 raised bog SAC sites. It is informed by and will support the aims of the National Peatlands Strategy.

The draft first revision to the NPF will need to work within the limits of these plans and policies to ensure that objectives do not have a negative impact on biological diversity. Some key considerations are that current and projected growth of cities, towns and villages, as well as associated infrastructure development and service provisions, are accommodated and developed in a manner that ensures that the biodiversity of Ireland is protected and maintained.

4.3.5 Water

The **Water Framework Directive [WFD] (2000/60/EC)** is the key instrument for protecting and improving the aquatic environment and as such it applies to surface water bodies such as rivers, lakes, estuaries, coastal waters, as well as groundwater bodies. Member states are required to achieve at least good status in all waters and must ensure that status does not deteriorate.

The **EU Groundwater Directive (2006/118/EC)** seeks to maintain and enhance the quality of all groundwaters in the EU. The **Environmental Objectives (Groundwater) Regulations 2010 (S.I. 9 of 2010)** as amended gives effect to the directive. These establish environmental objectives to be achieved in groundwater bodies and include groundwater quality standards and threshold values for the classification of groundwater and the protection of groundwater against pollution and deterioration in groundwater quality. The protection of potable groundwater resources requires continued attention as onshore renewable energy resources are explored and developed in Ireland.

The **Water Environment (Abstractions and Associated Impoundments) Act 2022** sets out a process for the registration, assessment and licensing of both surface water and groundwater abstractions. It aims to help Ireland meet the delivery of WFD objectives and to ensure that abstractions are sustainable and in line with the environmental goals.

The **Urban Waste Water Treatment Directive (91/271/EEC)** states that sludge arising from wastewater treatment shall be reused whenever appropriate. Where it is reused, the vast majority of sludge treatment standards and legislation relates to its reuse in agriculture. The main legislation in relation to the use of such sludge is the **Sewage Sludge Directive (86/278/EEC)** on the protection of the environment, and in particular of the soil. The **National Waste Water Sludge Management Plan (NWSMP)** was prepared in 2016, outlining the measures needed to improve the management of wastewater sludge. The plan was subject to both AA and SEA and included a number of mitigation measures which were identified in relation to transport of materials, land-spreading of sludge and additional education and research requirements. This plan does not specifically address domestic wastewater loads, only those relating to Irish Water facilities. An update to the NWSMP is currently being prepared by Uisce Éireann.

Ireland is currently in the latter stages of preparing the **3rd cycle River Basin Management Plan (RBMP)** for Ireland. The RBMP is required under the Water Framework Directive for the period 2022-2027. The plan, amongst other requirements, set out the environmental improvements to be delivered during a river basin planning cycle. The plan contains water quality objectives and an RBMP Programme of Measures to achieve those objectives.

Irish Water (now named Uisce Éireann) published its **Water Services Strategic Plan (WSSP) 2015-2040** in 2015 in line with the requirements set out in the **Water Services (No. 2) Act 2013, as amended**. One of the eight objectives proposed under this plan of relevance is Objective 6: Protect and Enhance the Environment which aims at sustainable delivery of water services, support objectives of Habitats, Birds and Water Framework Directives and sustainable management of residual waste. It also aims to ensure that water services are adapted to the climate change impacts. The next iteration of the **WSSP 2050** is planned to be published in 2025 and a draft is currently out for consultation alongside SEA and AA documentation supporting the assessment of the draft Plan.

The five-year **Capital Investment Plan (CIP) 2020-2024** from Irish Water was prepared for water and wastewater assets and infrastructure to 2024. The primary aim of this plan is to provide clean drinking water

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to customers and to treat and return wastewater safely to the environment. The provision of the water services ensures sustainable economic growth, protecting both the environment and the health and safety of the people. Irish Water adopted the **National Water Resources Plan** in 2022. This is a 25-year strategy plan which will be supported by four regional plans in due course. This plan sets out the approach and multi-criteria objectives which have been used to identify water management solutions at the national to regional level. The approach is focused on the principle of 'use less, lose less and supply smarter'. The assessment methodology has integrated environmental criteria including water quality and resource use.

The **National strategic Plan for Sustainable Aquaculture Development 2030** seeks to ensure that the recently updated but non-binding guidance for the sustainable development of EU aquaculture (2021 – 2030) is mainstreamed into national aquaculture sector planning. It will help inform the investment priorities for aquaculture in Ireland's **new European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027 (Seafood Development Programme)**. It will also ensure that strategic planning for the aquaculture sector in Ireland responds to the latest thinking in terms of the strengths, weaknesses, opportunities, and threats for Irish aquaculture in order to promote the development of a sustainable and forward-looking sector.

Dumping at sea from vessels, aircraft or offshore installations without a permit is prohibited by the **Dumping at Sea Act 1996, as amended**. The purpose of such a permit is to regulate the dumping of materials at sea. The **Foreshore and Dumping at Sea (Amendment) Act 2009** and provides for the transfer of other functions relating to the foreshore to other departments.

Future planning through the draft first revision to the NPF should contribute to the fulfilment of the environmental protection objectives required under the WFD through participation in river basin management planning at national level. The CIP also outlines the proposals for capital expenditure in terms of upgrades and new builds of Uisce Éireann-owned assets, which is a critical element of future growth for cities, towns and villages, as outlined in the draft first revision to the NPF. Other environmental protection legislation is in place to ensure the protection of the water environment from various activities.

4.3.6 Marine

The **Marine Strategy Framework Directive [MSFD] (2008/56/EC)** adopted an ecosystem-based approach to protect and manage the marine environment. This forms an integral component of maritime spatial planning within the EU and requires Member States to develop a strategy to achieve or maintain good environmental status (GES) in their marine waters by 2020. At national level, Ireland has developed an **MSFD Programme of Measures** that aims to meet the targets set in order to achieve or maintain GES. The **European Communities (Environmental Liability) (Amendment) Regulations 2015 (S.I. No. 293 of 2015)** extends the scope of existing environmental liability regulations to cover liability for environmental damage within the area covered by the MSFD.

Ireland's **National Marine Planning Framework (NMPF)** was published in July 2021 and forms a key decision-making tool for regulatory authorities and policy makers into the future. These decisions on individual consent applications in the coastal and marine space, must acknowledge the provisions of the NMPF in the same way that terrestrial plans form part of the decision-making toolkit in the terrestrial planning process.

Designated Maritime Area Plans (DMAP) are part of Ireland's new maritime consenting regime and will comprise portions of the maritime area that are designated for a specific use. DMAPs that are established for offshore renewable energy (ORE) will provide a systemic development of offshore wind potential for Ireland. DMAPs will determine the broad area where ORE projects can be developed and will act as a management plan for a specific area of our marine waters. The establishment of DMAPs will take place in line with Section 22 of the **Maritime Area Planning Act 2021**, according to an ecosystem-based approach, with full consideration for the protection of marine environment and biodiversity. The first DMAP proposal for ORE is under consultation. DMAPs for other maritime activities may also be put forward in the future.

The **Offshore Renewable Energy Development Plan (ORED)** sets out key principles, policy actions and enablers for delivery of Ireland's significant potential in this area. The ORED, therefore provides a framework for the sustainable development of Ireland's offshore renewable energy resources. Under the ORED, Ireland is developing a suite of world class test infrastructure to encourage the development of our offshore renewable energy potential. The draft **ORED II** was prepared and consulted on over 2023/2024. It has however been overtaken by the Marine Area Planning Act and the new regime in place to support marine ORE planning.

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The **draft Marine Plan for Northern Ireland** (2018) introduced a strategic approach to planning within the Northern Ireland marine area. It helps to deliver at a regional level the high-level marine objectives set out in the UK Marine Policy Statement (2011).

The **Welsh National Marine Plan** (2019) for the inshore and offshore Welsh marine plan regions and has been prepared in conformity with the UK Marine Policy Statement. It includes sectoral policies with respect to energy, including offshore wind, and subsea cabling.

The draft first revision to the NPF will have to align itself with NMPF and the MSFD Programme of Measures 2016.

4.3.7 Flooding

Floods are a natural and inevitable part of life that can pose a risk to human life and well-being, property and the environment. Flood risk can be minimised or avoided to a degree through careful selection of areas for development. The Office of Public Works (OPW) is responsible for the implementation of the **Floods Directive (2007/60/EC)** through the **Catchment-based Flood Risk Assessment and Management Studies (CFRAMS) Programme** that help in the identification of areas vulnerable or at risk of flooding.

Following the undertaking of Preliminary Flood Risk Assessments, **Flood Risk Management Plans** were developed for areas of existing or potentially significant future flood risk, setting objectives for managing risk and a prioritised set of measures. These form a national priority list which informs the programme of implementation for capital works. The CFRAMS work has had a direct strategic influence on land use planning and siting of developments, ensuring that future infrastructure growth is positioned in the appropriate locations, taking flood risk into account.

The **Flood Risk Management Climate Change Sectoral Adaptation Plan (2019)** sets out a long-term goal for adaptation in flood risk management, along with a set of objectives and adaptation actions aimed at achieving those objectives. The long-term goal adopted by the OPW on climate adaptation for flooding and flood risk management is: *Promoting sustainable communities and supporting our environment through the effective management of the potential impacts of climate change on flooding and flood risk.*

The long-term strategy for sustainable planning will be directly influenced by areas that are susceptible to flood risk ensuring that future infrastructure growth such as housing, transport routes and wastewater infrastructure are positioned in the appropriate locations. Managing flood risk and the increased pressure due to climate changes is a key aspect of adaptation measures; the implementation of the sectoral climate change adaption plans and updates to same are recognised and supported by the. It is important for spatial planning objectives to promote the resilience of infrastructure, as well as for coastal and island communities, to the effects of climate change, including flood protection of assets, and ensure that the goals of the draft first revision to the NPF and any projects that arise from it do not increase flood risk of other developments.

4.3.8 Circular Economy and Waste Management

The **Critical Raw Materials Act, 2024** seeks to secure diversified, affordable and sustainable supplies of critical raw materials which are both strategically important and / or have associated supply chain risks. These raw materials are used in car parts, satellites, mobile phones and many modern household items. They are critical to the EU efforts to achieve a green transition as many clean energy systems rely on them. The Act establishes three key targets for raw materials by 2030: 10% from local extraction; 40% to be processed in the EU and 25% to come from recycled materials.

The **Revised Waste Framework Directive (EU) 2018/851** lays down measures to protect the environment and human health by preventing or reducing the adverse impacts due to the generation and management of waste. The revised directive places responsibility on EU member states to improve their waste management systems, to improve the efficiency of resource use, and to ensure that waste is valued as a resource. The Waste Directive sets the context for waste management in member states and informs waste management plans at national level.

The **2nd EU Circular Economy Plan (CEAP) 2020** is a building block of the European Green Deal and recognises the need to accelerate the circularity transition to the mainstream economy. The CEAP identifies seven key product value chains and proposes six key actions on waste including waste reduction targets; harmonising collections; measures around substances of concern; scoping more EU-wide end-of-waste criteria; and revising shipment rules. The CEAP also commits to the further review of the Packaging Waste Directive to reinforce the mandatory requirements for packaging.

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At national level, the **Circular Economy and Miscellaneous Provisions Act 2022** defined the Circular Economy for the first time in Irish domestic law. Key measures within the Act include incentives for the use of reusable and recyclable alternatives to a range of wasteful single-use disposable packaging and other items, the re-designation of the Environment Fund as a Circular Economy Fund and introduces a mandatory segregation and incentivised charging regime for commercial waste. The Act also seeks to streamline the national processes for End-of-Waste and By-Products Decisions, tackling the delays which can be encountered by industry, and supporting the availability of recycled secondary raw materials in the Irish market.

The **Waste Action Plan for Circular Economy – Ireland’s National Waste Policy 2020-2025** builds on Ireland’s previous national waste policy, A Resource Opportunity. Overarching objectives of the Waste Action Plan include ensuring materials and products remain in use longer by rewarding circularity and discouraging waste. The Plan notes that a functional circular economy has wider environmental benefits through reduced waste generation, better management of residual waste, and reduced GHG emissions.

The **Whole of Government Circular Economy Strategy (CES) 2021-2022** is a strategic document that is intended to explain what the circular economy is, why Ireland needs to achieve a circular economy and how national policy will develop to support that goal. The strategy sets out the national policy framework to support the transition to a circular economy and encourages investment in reuse, remanufacturing, repair and refurbishment and eco-design. The CES explains why Ireland needs to achieve a circular economy and how national policy will develop to support that goal.

The **National Waste Management Plan for a Circular Economy 2023-2029** has been prepared to replace the previous three Regional Waste Management Plans 2015-2021. It sets out a framework for the prevention and management of waste in Ireland for the period 2023 to 2029. The plan aims to support and supplement the wider policy base while also including specific targets, policies and actions to enable the waste and resource sector to meet the circular challenge.

The fourth **National Hazardous Waste Management Plan (NHWMP) 2021-2027** is published by the EPA. One of the main objectives of NHWMP is to promote safe reuse and recycling pathways in support of the circular economy. Prevention forms an important part of all local and regional waste management plans and the NHWMP recommends that these provisions be implemented in full in lower tier plans, especially in relation to hazardous waste.

The **National Food Waste Prevention Roadmap 2023-2025** documents how Ireland will achieve a 50% reduction in food waste generation by 2030 in line with the UN SDG Target 12.3. In addition, the roadmap sets out the approach to ensure a robust national system for food waste measurement and reporting is established in order to meet Ireland’s reporting obligations and to monitor Ireland’s progress in meeting its UN and EU commitments over the next decade. The issue of food waste has implications for climate actions and is a key issue area to tackle, as the majority of food waste, at 71% of 2021 figures, is generated along the supply chain before it gets to households.

This suite of circular economy P/Ps are directly relevant to the draft first revision to the NPF, which recognises the importance of tackling waste generation and improving on circular economy principles, and acknowledges that a circular economy can have positive environmental, economic and social impacts, such as reduced waste generation and associated pollution, new employment opportunities, better quality and longer-lasting consumer products, and reduced demand for consumption of resources. As the draft first revision to the NPF outlines the need for compact smart growth, there is a likelihood of generating increased volumes of contaminated land that will have to be removed from brownfield sites and this material will require appropriate management and disposal.

4.3.9 Transport and Mobility

The Transport Infrastructure Ireland (TII) **Climate Adaptation Strategy**, published in December 2022, outlines TII’s approach to adapting to climate change and extreme weather events, including flooding, increased risk of landslides, pavement degradation and possible storm damage that will affect the National Roads network and light rail networks. The Strategy builds upon the previous climate adaption strategy published by TII in 2017. The strategy also responds to the Climate Action Plan 2021 (CAP21) Action 297, *“Improve climate resilience and adapt to climate change on the Light rail and National Road Network”*.

The **Greater Dublin Area Cycle Network Plan** covers the urban network, inter-urban network and green route network for each of the seven local authority areas comprising the Greater Dublin Area. It is currently being updated.

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The **National Cycle Network (NCN)** is TII's planned core cycle network, comprising 3,500 km of cycleways, that will aim to traverse the country and connect more than 200 villages, towns and cities, as well as links to transport hubs, education centres, employment centres, recreational destinations. The NCN is currently under public consultation. **CycleConnects** is the NTA's plan currently under development in liaison with local authorities, setting out proposals for cycling links in key cities, towns and villages in each county, in addition to connections between the larger towns, villages and settlements. Both the NCN (as the inter-urban cycling network) and CycleConnects (representing the intra-urban cycling network) will inform Ireland's active travel programme. This network will include many existing and planned greenway routes. The draft proposals under CycleConnects will complement existing plans already developed for the GDA. Delivery partners will include TII, NTA and the Department of Transport in conjunction with the relevant local authority. These two strategies aim to inform future investment by local authorities in the coming years.

National Roads 2040 (NR2040) is TII's long-term strategy for planning, operating, and maintaining the National Roads network. NR2040 has been developed to support the delivery of Project Ireland 2040 objectives and to align with the Department of Transport's National Investment Framework for Transport in Ireland (NIFTI, December 2021). NR2040 also aligns with commitments in wider policy including the Climate Action Plan and the Department of Transport's National Sustainable Mobility policy.

The **National Policy Framework on Alternative Fuels Infrastructure for Transport 2017-2030** communicates the government's longer term national vision for decarbonising transport by 2050, the cornerstone of which is the ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable. Reducing reliance on imported oils and switching to alternative fuels and technologies will be essential to decarbonise the sector.

The **National Investment Framework for Transport in Ireland (NIFTI)**, published in December 2021, is the Department of Transport's framework for prioritising future investment in the land transport network to support the delivery of the NPF National Strategic Outcomes (NSOs). NIFTI also ensures alignment with the Climate Action Plan 2021 by incorporating measures set out within the action plan for land transport. As the NSOs are embedded in NIFTI, future National Roads investment that is in accordance with these priorities will support the delivery of the NPF over the coming decades to 2040.

The Department of Transport's **National Sustainable Mobility Policy**, published in April 2022, sets out a strategic framework to 2030 for active travel and public transport. The policy aims to support Ireland's overall requirement to achieve a 51% reduction in carbon emissions by the end of this decade. The policy targets of at least 500,000 additional daily active travel and public transport journeys and a 10 percent reduction in kilometres driven by fossil fuelled cars by 2030, in line with targets for transport set out in the CAP 2021. For TII, actions relating to National Roads are set out in the NR2040 Strategy.

The **Trans-European Transport Network (TEN-T) Policy**, based on **Regulation (EU) No 1315/2013**, supports provision of quality transport infrastructure across the European Union. The objective is to improve the use of infrastructure, reduce the environmental impact of transport, enhance energy efficiency, and increase safety whilst implementing and developing a Europe-wide transport network. TEN-T policy comprises two 'layers': the Comprehensive Network covers all European regions and is to be completed by 2050; and the Core Network, subset of the comprehensive network, to be completed by 2030.

The **Transport Strategy for the Greater Dublin Area 2022-2042** has been prepared and published by the National Transport Authority (NTA) in accordance with Section 12 of the Dublin Transport Authority Act, 2008. It sets out how transport will be developed across the region, covering Dublin, Meath, Wicklow and Kildare, over the period of the strategy and has been approved by the Minister for Transport in accordance with the relevant legislation.

The **Cork Metropolitan Area Transport Strategy (CMATS) 2040** has been developed by the NTA in collaboration with Transport Infrastructure Ireland (TII), Cork City Council and Cork County Council. A key principle for CMATS is to reduce dependency on the private car within the CMA, while increasing the appeal of sustainable transport options. Another fundamental principle of the Strategy is to support the future growth of the CMA through the supply of an efficient transport network. Supporting measures have an important role to play in providing a future transport network that matches up to these principles.

The **Limerick Shannon Metropolitan Area Transport Strategy (LSMATS)** sets out the framework for the delivery of the transport system required to further the development of the Limerick Shannon Metropolitan Area as a hub of cultural and social development and regeneration; as the economic core for the Mid-West; as an environmentally sustainable and unified metropolitan unit; as a place where people of all ages can travel conveniently and safely; and a place that attracts people, jobs and activity from all over Ireland and beyond.

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The **Waterford Metropolitan Area Transport Strategy (WMATS)** sets the framework for an accessible, high-quality and integrated transport network that provides for the travel demand and supports the sustainable growth of the Waterford Metropolitan Area as a major growth engine of the Southern Region, and an internationally competitive European city region as envisaged by the National Planning Framework 2040.

The **Galway Transport Strategy (GTS)** is an integrated transport strategy for Galway City and environs. The GTS sets out a series of actions and measures, covering infrastructural, operational and policy elements to be implemented in Galway over the next 20 years and sets out a framework to deliver the projects in a phased manner.

The NTA's **Active Travel Programme** is managed and delivered by the Local Authorities. One of the key aims cited is to increase the number of walking and cycling networks so that walking, cycling and public transport will account for 50% of all journeys made by 2030. By 2025, the NTA aims to have delivered in excess of 1,200 projects equating to 1,000 km of combined cycling and walking routes nationwide.

The draft **All-Island Strategic Rail Review (AISRR) 2023** aims to inform policy and future strategy for the railways in both jurisdictions on the island of Ireland. It has examined how the island's railways are currently used, what role rail could play in the future and how the island's railway could better serve the people of both jurisdictions. The AISRR has focused on how the rail network across the island could contribute to the decarbonisation of the island's transport system, promote sustainable connectivity into and between major cities, enhance regional accessibility and support balanced regional development. Public consultation on the draft AISRR has now closed.

The aim of the **National Ports Policy 2013** is to allow a competitive and effective market for maritime transport services. The role of National Ports Policy is to establish a framework for setting out the likely requirements in the future, to highlight the strategic importance of providing for the continued development of the commercial port network, and to set out the bodies tasked with developing this additional capacity. This policy is now undergoing a review and consultation on the revision is set to commence in 2024.

This suite of transport P/Ps are directly relevant to the draft first revision to the NPF, as the “avoid-shift-improve” framework being utilised in the transport sector is a key aspect for helping to decarbonise the sector, reduce overall number of kilometres travelled, and avoid lock-in to private vehicle use. This also helps to realise benefits to air quality and human health as tailpipe emissions (such as nitrogen oxides and particulate matter) are key contributors to poor air quality. Modal shift and active travel also go hand in hand with compact growth and development and is an important consideration in terms of co-locating services with homes and businesses.

4.3.10 Cultural Heritage and Landscape/Seascape

The principle national legislation addressing built heritage is the **Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023**. The Act replaces the existing National Monuments Act 1930 to 2014, and other related legislation. This new legislation underpins the protection of Ireland's historic heritage. It includes strengthened protection for archaeological finds, additional licensing requirements, provisions for ratification of a number of treaties including the UNESCO convention on protection of underwater archaeology.

A draft **Strategy for World Heritage in Ireland 2024 – 2034** has been published for consultation. This Strategy commits to reviewing Ireland's approach to World Heritage, putting in place revised procedures for proper protection, conservation, management, interpretation, and presentation of Ireland's World Heritage Properties and Tentative List sites. There will be explicit provision for the protection of World Heritage sites, including, for the first time, a definition in Irish law for “World Heritage Property”.

The **Framework and Principles for the Protection of the Archaeological Heritage (Government of Ireland 1999)** sets out the national policy relating to the protection of the archaeological heritage in the course of development and in accordance with the aims and requirements of the **Valletta Convention 1992** (on the Protection of the Archaeological Heritage), to which Ireland is a party.

Heritage Ireland 2030 is a cross-Government strategic policy for heritage that sets out a framework for the protection, conservation, promotion and management of Ireland's heritage for the next decade and beyond. The Strategy lays out a roadmap for the best possible future for Irish heritage with a joined up approach at government, stakeholder and community levels. A comprehensive implementation plan is now being developed to deliver on its actions. The principal themes of the strategy are communities, leadership and

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partnerships, reflecting the importance of ongoing collaboration between government and communities, stakeholders, citizens and local authorities in delivering upon the objectives of this strategy.

The heritage sector is comprised of many different sub-sectors and interests. **Culture 2025** is a Framework Policy to 2025 which sets the vision for the future of culture and the arts in Ireland and prioritises actions. It recognises the diverse and multi-faceted nature of culture in Ireland and the contribution of 'culture' to sense of self, national identity, and the arts. At the project level, specific archaeology/architecture plans become more relevant.

The **Archaeology 2025 Strategy: A Strategic Pathway for Ireland** is an initiative of the Royal Irish Academy (RIA) and was launched by the Department of Culture, Heritage and the Gaeltacht in 2017. It sets out the long-term strategy for the practice and resource of archaeology in Ireland. Its vision is *The promotion of archaeology in understanding the past and as a valuable resource shared by all*. It includes six key pillars covering: Delivering archaeology; sustaining practice; modernising legislation; expanding research horizons; developing education and skills; and maximising impact.

Places for People – the National Policy on Architecture was published in 2022. It sets out various ways to promote and embed design quality in architecture and the built and natural environment in Ireland, and aims to boost engagement with the public regarding architecture. Places for People aims to boost public engagement with architecture as well as improve data and research on the built environment. It contains a suite of actions aiming to “*create, sustain and regenerate local areas as vibrant, welcoming and sustainable places in which communities can flourish*”.

The **Historic Towns Initiative (HTI) 2024** is a joint undertaking by the Department of Housing, Local Government and Heritage and the Heritage Council, and it supports the Town centre First' policy approach. It aims to promote heritage-led regeneration of Ireland's historic towns. The 2024 initiative has a particular interest in projects that aim to address town centre vacancy and the reuse of historic structures which can then act as demonstrator projects.

The **National Landscape Strategy for Ireland (2015-2025)** was produced in line with Ireland's obligations under the European Landscape Convention. The strategy aims to assist with future decision-making processes in Ireland, ensuring that decisions are made based on factual evidence collected and that there is consistency in the decision making across the country. A number of the actions outlined within the strategy will have a direct influence on lower planning tiers, such as the RSES's. The National Landscape Strategy will undergo review during the next period of the NPF.

As the draft first revision to the NPF will require the reuse of the existing building stock and reducing vacancy rates, it must align with the objectives of heritage policy with a view to conserve and protect heritage while allowing for development in a sensitive and sustainable way. Landscape, seascape and town/cityscapes are also important considerations in terms of baseline sensitivities.

4.3.11 Land Use

4.3.11.1 Land and Soil

The **Land Use, Land Use Change and Forestry (LULUCF) Regulations (EU) 2018/841** (inclusion of greenhouse gas emissions and removals from the LULUCF sector in the 2030 climate and energy framework) requires all Member States adhere to the 'no-debit' rule over two five- year periods, and envisages efforts to increase the LULUCF carbon sink from 2030 onwards. It introduced accounting obligations for all types of land use from 2021 onwards; for wetlands, these obligations arise from 2026 onwards. The LULUCF Regulation was revised in 2023 for the period up to 2030. To help reach climate neutrality, for the first time, the revised LULUCF regulation has a separate land-based net carbon removals target of 310 million tonnes of CO₂ equivalent by 2030.

The **Indirect Land Use Change (ILUC) Directive (EU) 2015/1513** amends certain provisions of the **Renewable Energy Directive** and the **Fuel Quantity Directive**, and introduced rules in 2015 in order to help lower the risk of causing indirect land use changes while also facilitating the greater use of biocrops. The amendments include for an initial capping the contribution of biofuels produced from 'food' crops on agricultural land at 7%, placing a greater emphasis on the production of advanced biofuels from waste feedstocks, as well as more incentives to encourage biofuels produced in new installations to produce 60% less greenhouse gas emissions than fossil fuels, and stronger incentives to encourage renewable electricity use in the transport sector.

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Currently, there is no EU-wide legislation specifically on soil, however under the EU biodiversity strategy for 2030, the EU Commission have developed a soil strategy with the aim of having all EU soil ecosystems in a healthy condition by 2050 (currently the Commission estimate 60% of soils are in an unhealthy state).

The **EU Soil Strategy for 2030** sets out a framework and concrete measures to protect and restore soils, and ensure that they are used sustainably. It sets a vision and objectives to achieve healthy soils by 2050, with concrete actions by 2030. To achieve this objective, the Commission has tabled a **Soil Monitoring and Resilience Directive**, laying down measures for monitoring and assessing soil health. Under the EU's Biodiversity Strategy for 2030, the issue of land take is also identified as being a major threat to biodiversity, and the EU's **Soil Strategy for 2030** sets out an aim for "no net land take by 2050".

Under the **Nature Restoration Law**, objectives are presented for restoration of urban ecosystems e.g. "no net loss of urban green space, and of urban tree canopy cover in urban ecosystem areas; restoration of the natural connectivity of rivers e.g. removal of artificial barriers; restoration of pollinators e.g. putting in place appropriate and effective measures, improve pollinator diversity. If signed, it will require Ireland to prepare a National Restoration Plan to identify the restoration measures that are necessary to meet the targets and obligations of the law.

These P/Ps are an important consideration in the context of the draft first revisions to the NPF as many types of development are supported by the Plan and down through the planning hierarchy; land use changes can be both positive (agricultural diversification, housing and mobility infrastructure provision etc.) as well as negative (loss or fragmentation of habitats or to landscape and heritage from development etc.).

The issue of urban/settlement sprawl and conversion of land from greenfield/natural states to artificial surfaces has many environmental effects. This underpins the importance of development on and reuse of existing built-up areas and brownfield sites, and the need to mainstream and build in nature-based solutions and green/blue spaces is an important consideration for land use and spatial planning principles. The protection and restoration of soils is also a key consideration as to date, there has never been a specific legal framework for their protection either at European or at national level, aside from project-level considerations in EIA and similar assessments.

4.3.11.2 Agriculture and the Rural Environment

Ireland's **Common Agricultural Policy Strategic Plan (CSP) 2023-2027** will underpin the sustainable development of Ireland's agriculture sector by: (i) supporting viable farm incomes and enhancing competitiveness (ii) contributing to the achievement of environmental and climate objectives at national and EU levels, and (iii) strengthening the socio-economic fabric of rural areas. Ireland's CSP seeks not just to meet the three general and nine specific objectives set out in EU legislation, but also to contribute to meeting the objectives of the European Green Deal and the Farm to Fork and Biodiversity strategies. The CSP is also a considered response to a comprehensive assessment of the current situation of Ireland's agriculture sector and the future challenges it faces.

The vision of **AgClimatise – A Roadmap towards Climate Neutrality** is that to develop a climate neutral food system by 2050 compatible with the Paris temperature goals, whereby the climate impact of biogenic methane is reduced to zero and remaining agricultural emissions are balanced by removals through land use and a significant contribution to renewable energy.

Our Rural Future: Rural Development Policy 2021-2025 represents the Irish Government's blueprint for a post-COVID-19 recovery and development of rural Ireland over the period of 2021-2025. It provides the framework to achieve the vision of transforming the quality of life and opportunity for people living in rural areas. The vision of this policy is for a thriving rural Ireland which is integral to our national economic, social, cultural and environmental wellbeing and development.

The scope of the **Nitrates Action Programme (NAP)** to date has been comprehensive, both in terms of addressing the major sources of agricultural nutrients and in covering a national farming population of over 139,600 farm holdings. The measures set out in this programme are intended to help Ireland to meet its climate, biodiversity and water quality targets set at both national and EU level. The NAP is given legal effect by the Good Agricultural Practice for Protection of Waters Regulations 2006 (S.I. No. 378/2006), as amended and directly contribute to the protection of water quality and meeting the objectives of the WFD. The current programme is the 5th NAP which is currently undergoing an interim review in line with requirement of EC's Decision in relation to derogation.

Food Wise 2025 sets out how Ireland and the Irish agri-food sector can grow by refining its focus around these objectives. It recognises the importance of the industry committing to processes that are sustainable –

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economically, socially and environmentally. It identifies significant growth opportunities across all sub-sectors of the Irish agri-food industry and outlines key actions to maximise the sector's contribution to agricultural growth and exports.

Food Vision 2030 which was adopted in August 2021, has 22 goals grouped under four missions, one which is A Climate Smart, Environmentally Sustainable Agri-Food Sector (taken to include primary agriculture, food and drink processing and manufacturing, fisheries, aquaculture and fish processing, forestry and forestry processing and the equine sector). Achieving the objectives within this strategy has the potential to apply increased pressure on the environment in localised areas through the intensification of farming. One of the main objectives of the Strategy is to achieve a climate-neutral food system by 2050, with verifiable progress achieved by 2030, encompassing emissions, biodiversity and water quality, as well as a range of other targets for forestry, fisheries, organic farming and food waste.

In October 2023, the first **National Bioeconomy Action Plan 2023-2025** was published, setting out the vision and objectives to achieve a circular, regenerative and sustainable bioeconomy.

A **National Biomethane Strategy** has been prepared, which sets out the objective of achieving 5.7 TWh of indigenous biomethane production by 2030. It is expected that the development of a national bioeconomy and anaerobic digestion along with agricultural diversification, will be the mechanisms for delivering on this ambitious target. It is estimated that this level of biomethane would offset approx. 10% of current national natural gas demand.

All of these sectoral activities require use of the national land resource and have important economic and social aspects also. The development of expanded forestry activities, agricultural activities and diversification, and the development of a bioeconomy and indigenous biomethane generation are important considerations and have implications for national spatial planning.

4.3.11.3 Forestry

The **Nature Restoration Law** will also have implications for forestry as it includes proposals for planting of an additional three billion trees, noting however that this must be achieved in full respect of ecological principles. It also promotes synergies with agriculture and forestry.

Ireland's Forest Strategy (2023 – 2030) sets out a cross-societal shared national vision for forestry in Ireland. The overarching strategic objectives of the Forest Strategy are 'People, Planet and Prosperity'. These objectives have been established to develop an internationally competitive and sustainable forestry sector that provides a full range of economic, environmental and social benefits to society into the future, and which aligns with the Forest Europe definition of sustainable forest management.

The **Forest Strategy Implementation Plan** is a comprehensive, ambitious, and long-term plan to protect and enhance Ireland's Forests. Ireland is fully committed to realizing the important role that forests and the forest-based sector must play in the transition to a sustainable, green, climate neutral and competitive circular bioeconomy. Goals of this plan include fostering a shared vision where *trees and forests are seen as a symbol of the transformational changes; harnessing forestry to deliver a greater range of ecosystem services and nature protection; and promotion of timber* will be the material of choice for new Irish homes.

The Forestry Programme **2023-2027** is a €1.3 billion investment by the government in Irish forestry for the next five years from 2023-2027 which required State aid approval by the Commission. The new Programme provides for increased premiums for planting trees of up to €1,142 per hectare depending on the forest type, as well as extending the premium period from 15 to 20 years for farmers. Others will receive premiums for 15 years. It offers a broad range of planting options, and the rates are 46%-66% higher than the previous Forestry Programme.

In April 2022, Coillte, Ireland's semi-state forestry company, announced their **Coillte Strategic Vision (2022)**, which comprises a forestry strategic vision aiming to deliver multiple benefits from its forests and bring more focus to climate action, setting ambitious new targets on biodiversity and recreation, while continuing to deliver for the forest and wood products industry. The approach aims to sustainably balance and deliver the multiple benefits from Ireland's state forests across four strategic pillars: climate, wood, nature, and people. The Vision proposes a range of innovative actions designed to result in a total capture of approx. 28m tonnes of CO₂ from the environment by 2050 across these four pillars. As a part of this vision the following actions are proposed amongst many others:

- 100,000 hectares of new forests will be created by 2050 supporting the delivery of the national afforestation target; and create a carbon sink of 18 million tonnes of CO₂;

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- 25 million m³ of Irish timber to be supplied in a sustainable manner; and
- 204,000 hectares of Coillte's estate to be managed primarily for biodiversity by 2025.

Coillte also develops **Business Area Unit (BAU) Strategic Forest Plans** for BAU, which are reviewed every five years, set out a vision for the forests in each BAU and also outlines how Coillte policies and objectives will be implemented within them. The current plans cover the period of 2021-2025. These plans promote sustainability within the plans in relation forestry by focussing on objectives including wise use of natural and cultural resources; effective protection of the environment; sustainable supply of forest products (wood and non-wood); and working with communities.

Land use is an important consideration for national spatial planning, as there is often competition for adequate land space, which the draft first revision to the NPF must be cognisant of.

4.3.12 Environmental Quality (Health, Air, Noise)

4.3.12.1 Human Health

Healthy Ireland 2015-2025 is the Health Service Executive (HSE) framework strategy for improving health and wellbeing. The main aims of Healthy Ireland therefore are to: increase the numbers of people experiencing good health (mental and physical) at all life stages; reduce health inequalities with a focus on social factors; protect the public and increase preparedness for threats to public health; and to encourage every individual and society as a whole to collaboratively engage with its own health and wellbeing.

The **National Age Friendly Ireland Programme** sets out a range of policy supports, including the provision of walkable streets, housing and transportation options, providing access to key services as well as opportunities for older people to participate in community activities. The programme is a shared service function of local government sector and provides a national centralised service to support the ongoing development, implementation and sustaining of the programme's national strategy.

A key aim of the NPF is sustainable land use planning which takes account of growth patterns, populations change and changing demographics. It is recognised that people in Ireland are experiencing increasing life expectancy and decreased mortality from various diseases. However it is also recognised that there are a number of trends which are leading people towards unhealthy lifestyles and increased healthcare costs later in life.

4.3.12.2 Noise

Regulation of noise comes under the remit of the **Environmental Noise Directive (2002/49/EC)**, with the requirement for member states to produce noise maps and compile noise action plans based on those maps. It was amended by **Directive (EU) 2015/996** establishing common noise assessment methods and replacing Annex II of the 2002 END. END is transposed in Ireland through the **Environmental Noise Regulations 2018 (S.I. No. 549/2018)**. Local authorities publish Noise Action Plans on a regular basis. Environmental noise is unwanted or harmful outdoor sound created by human activities, including noise emitted by means of transport (road, rail and air traffic), and from sites of industrial activity including the categories of activities specified in Annex I to the IED. Nuisance noise is dealt with under the **Environmental Protection Agency Act 1992, as amended**.

Noise emissions can be generated from various sources and activities. Given Ireland's relative lack of heavy industries compared to the rest of Europe, the main sources of noise arise from road, rail and airports.

4.3.12.3 Air Quality

The **Convention on Long-Range Transboundary Air Pollution (CLRTAP)B**, also referred to as the Air Convention, entered into force in 1983. The primary aim of this convention is to protect the human environment against air pollution and to gradually reduce and prevent air pollution, including long-range transboundary air pollution. It is implemented by the **European Monitoring and Evaluation Programme (EMEP)**, directed by the United Nations Economic Commission for Europe (UNECE). Parties of the CLRTAP meet annually to develop policies and strategies to combat the discharge of air pollutants through exchanges of information, consultation, research and monitoring. The Convention has been extended by eight protocols that identify specific measures to be taken by Parties to cut their emissions of air pollutants, such as sulphur

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emissions, nitrogen oxides, volatile organic compounds, heavy metals, persistent organic pollutants, and abating acidification, eutrophication and ground-level ozone:

The **Ambient Air Quality and Cleaner Air for Europe [CAFE] Directive (2008/50/EC)** sets out the requirements for ambient air quality to protect human health and the environment as a whole. The CAFE Directive has been implemented in Ireland through the Air Quality Standards Regulations 2011 (S.I. No. 180/2011), as amended, and the Fourth Daughter Directive via S.I. No. 58/2009, as amended. These regulations set ambient air quality limits and target values for air pollutants.

The **Clean Air Strategy for Ireland (2023)** aims to *'provide the strategic policy framework necessary to identify and promote the integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives*. It sets out the detail of the seven strategic frameworks that will be used to ensure that air quality continues to improve. These frameworks include communications, monitoring, enforcement, legislation, policy developments, ambition and strong governance and targeted policy measures.

The **National Ambient Air Quality Monitoring Programme (AAMP) 2017-2022** involves a greatly expanded national monitoring network providing enhanced real-time information to the public, supplemented by an additional increased local authority capacity to conduct local monitoring. The network will be supported and augmented by increased modelling and forecasting capability, with the aim of providing an ongoing air quality forecast to the public.

The **National Air Pollution Control Programme (NAPCP) (2021)** outlines the pathway Ireland will follow to achieve compliance with its commitments under the **National Emission Ceilings (NEC) Directive (2001/81/EC)** and the **revised NEC Directive (2016/2284/EU)**. It includes policy options, measures and actions across sectors but in particular in the residential, transport agricultural and energy sectors aimed at reducing emissions of the five NEC-specified air pollutants. The NEC Directive covers non-methane volatile organic carbons, fine particulate matter, sulphur dioxide, and nitrogen dioxide (NO₂).

The **World Health Organization (WHO) Air Quality Guidelines (AQG) 2021** were published 2021. These guidelines are not legally-binding standards, however, they do provide WHO Member States with an evidence-informed tool that they can use to inform legislation and policy. The levels are presented as an ultimate guideline as well as a series of interim targets which are proposed as incremental steps in a progressive reduction of air pollution and are intended for use in areas where pollution is high. It is notable that the limits recommended by the WHO are significantly lower than the **Air Quality Standards Regulations (S.I. No. 180/2011) as amended**, for key traffic pollutants such as NO₂ and PM₁₀. In October 2022, the EC proposed to revise the Ambient Air Quality Directives to align more closely with the recommendations of the WHO AQGs.

In 2021, the four Local Authorities of the Dublin region published the **Dublin Region Air Quality Plan** which sets out 14 measures and associated actions to address the exceedance of the nitrogen dioxide annual limit values in the region. While the measures will be given expression through county and local planning tiers the implications for the Dublin MASP will need to be considered in the draft first revision. It is noted that the Dublin Region Air Quality Plan is legally binding.

Air quality is regulated both at the local level through ambient air quality limits and at the national level through emission ceilings. While Ireland in general has good air quality, there has been a shift in recent times towards setting tighter limits at EU level, which mainly driven by the WHO Air Quality Guidelines. Solid fuel burning for space heating, particularly in rural areas, can lead to localised air quality issues. Tailpipe emissions from fossil fuelled vehicles are a key contributor to air quality issues in more built-up and urban area, namely from nitrogen oxides and particulate matter. Compact growth and settlement patterns is a key aspect of the draft first revision to the NPF; actions and objectives set out under other sectoral-specific and whole of Government plans such as the Climate Action Plan and the various sustainable transport P/Ps and initiatives (such as increasing the proportion of electrified of vehicles and modal shift) can together lead to co-benefits for coordinated land use/infrastructure planning, improved health outcomes and air quality, and reduced GHG emissions from the transport and built environment sectors.

5 RELEVANT ASPECTS OF THE CURRENT STATE OF THE ENVIRONMENT

5.1 Introduction

This chapter of the Environmental Report examines the relevant significant issues of the current state of the environment in relation to the topics of: Biodiversity, Flora and Fauna; Population and Human Health; Water; Land and Soils; Air Quality and Climatic Factors; Material Assets; Cultural Heritage; Landscape and Seascapes; and the interrelationship between these factors. The baseline has been compiled using available datasets and indicators developed through scoping and this environmental assessment. It is noted that the draft first revision to the NPF is national in its focus and this is mirrored in the level of detail presented for the baseline descriptions that follow. The baseline descriptions are focused in the first instance on the Republic of Ireland, however given the boundary and common geology with Northern Ireland, there is potential for environmental impact to soils, water, biodiversity, climate etc. As such the description below includes reference, where relevant, to conditions in Northern Ireland. The characteristics of areas likely to be significantly affected and existing environmental problems are summarised for each topic heading.

5.2 State of the Environment Overview

5.2.1 Republic of Ireland

Ireland's natural environment represents one of the country's most essential national assets (EPA, 2012, 2016 and 2020). However, it is acknowledged that under increasing pressure, the quality of the environment is not considered to be good. In the 7th, and most recent, state of the environment review *Ireland's Environment – An Assessment 2020* (EPA, 2020)⁷, the EPA outlines a summary scorecard for the progress being made across key environmental policy areas as well as the general trend/outlook. The scorecard shows that the improvements being made are not of appropriate scale and are therefore insufficient to meet long-term environment protection objectives and targets. The relevant topics are summarised in **Table 5-1**.

Table 5-1: Summary assessment and future outlook for selected environmental policy areas from the EPA State of the Environment 2020 Report relevance to the draft Plan

Policy Area	Summary Assessment & Outlook	Relationship to the Draft First Revision to the NPF
Climate	<p>Assessment: Very poor / significant environmental and/or compliance challenges to address</p> <p>Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation</p> <p>Ireland has made good progress in deploying renewable energy sources and has an ambitious National Energy and Climate Plan, and Climate Action Plan. However, Ireland continues to have a high level of greenhouse gas (GHG) emissions and remains above its EU emission limit, missing the target for 2020. Should all the actions in the Climate Action Plan be fully adopted and implemented, the targets for 2050 could be achieved. However significant challenges remain to reaching these goals.</p>	<p>Within the EPA latest emissions data (EPA, 2023⁸), in 2022, Ireland GHG emissions were estimated to be 60.76 million tonnes carbon dioxide, which is 1.9% lower (or 1.19 Mt CO₂ eq) than emissions in 2021 (61.95 Mt CO₂ eq) and follows a 5.1% increase in emissions reported for 2021.</p> <p>The EPA's GHG Emissions Projections report for the period 2022-2040 (June 2023) acknowledges that if all of the unmodelled policies and measures in CAP23 and the, as yet, unallocated emissions savings are included, the reduction in emissions could equate to 42% by 2030, which is closer to the 51% target for 2050.</p> <p>Notwithstanding that the EPA report from 2020 states that the CAP targets could be achieved, more recent EPA inventory data shows that Ireland is not on track to achieve these targets. The draft first revision to the NPF sets out increased targets for population growth which will impact Ireland's</p>

⁷ EPA (2020). Ireland's Environment – An Assessment. Available at: <https://www.epa.ie/Ireland/senvironment/stateoftheenvironmentreport/>

⁸ EPA (2023), EPA Latest Emissions data. Available at: [Latest emissions data | Environmental Protection Agency \(epa.ie\)](#).

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Policy Area	Summary Assessment & Outlook	Relationship to the Draft First Revision to the NPF
		ability to achieve stated and committed targets in 2030 and beyond, particularly where reduced emissions cannot be secured from renewable sources to keep pace with the demands brought about by increased population growth.
Air Quality & Emissions	<p>Assessment: Moderate / on track generally / local or occasional challenges</p> <p>Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation</p> <p>Air quality in Ireland is generally very good and consistently meets its EU limit values. There was however an exceedance in 2019 of nitrogen dioxide at a monitoring station in Dublin, and Ireland at times does not meet the more stringent limit values set by the WHO (namely of fine particulate matter). In terms of transboundary emissions, Ireland is failing to meet EU targets on ammonia emissions under the National Emissions Ceiling (NEC) Directive, of which agriculture is the main source. Progress is mixed progress in terms of reducing emissions from other sectors such as transport and energy. Measures at a national level are required to tackle this and improve the outlook.</p>	<p>The two main sources of air pollution in Ireland are PM_{2.5} from solid fuel burning and NO₂ from traffic emissions from internal combustion engines (i.e. vehicles).</p> <p>As noted for climate, the draft first revision to the NPF sets out increased targets for population growth which will impact Ireland's ability to reduce emissions and improve air quality unless transitioning to electric vehicles and reducing private car dependency via modal shift and public services, and by expanding the home retrofitting scheme, which will reduce dependency on solid fuel burning (such as coal, peat and wood) for space heating can keep pace with the population increases.</p>
Water	<p>Assessment: Poor / environmental and/or compliance challenges to address</p> <p>Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation</p> <p>In general, trends in water quality are mixed; over the past 20 years, there has been a deterioration in the number of the highest quality water bodies, particularly rivers, and mixed progress in waters achieving the environmental objectives under the Water Framework Directive (WFD). Good progress has been made in improving wastewater treatment however issues remain. Nutrient enrichment remains the main significant issue. The outlook is also mixed, and a balance needs to be sought between a growing population and certain sectors such as intensive agriculture.</p>	<p>The majority of groundwater bodies (92%) are at Good chemical status, and nearly all are at Good quantitative status. Surface water bodies are faring less well with 56% achieving at least Good status (EPA, 2023)⁹.</p> <p>The draft first revision to the NPF supports the provision of services such as water and wastewater infrastructure under various capital programmes (such as the Irish Water Capital Investment Programme), which will be needed to keep pace with a growing population. Where service capacity is not developed and phased appropriately, this could lead to pressures on water bodies. Infrastructural development supported by the draft first revision to the NPF can also have environmental effects on water bodies.</p>
Nature	<p>Assessment: Very poor / significant environmental and/or compliance challenges to address</p> <p>Outlook: Largely not on track to meet policy objectives and targets.</p> <p>The assessment and outlook are overall very poor. Biodiversity losses and habitat changes continue on an international scale. EU conservation status reporting indicates generally declining trends and unfavourable status for many habitats, with 85% of habitats in Ireland assessed under the Habitats Directive having unfavourable status in 2019. Many species are faring better, but 15% of EU-listed</p>	<p>Under the Climate Action and Low Carbon Development (Amendment) Act 2021¹⁰, Ireland's national climate objective requires the State to pursue and achieve, by no later than the end of the year 2050, the transition to a climate-resilient, biodiversity-rich, environmentally sustainable and climate-neutral economy</p> <p>The draft first revision to the NPF aims to enhance biodiversity through integration of the Nature Restoration Law including peatlands / wetlands, with positive effect for climate change also.</p> <p>The draft first revision to the NPF also aims to support marine biodiversity through better</p>

⁹ EPA (2023). Water Quality in 2022 – An Indicator's Report. Available at: <https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/water-quality-in-2022-.php>

¹⁰ Climate Action and Low Carbon Development (Amendment) Act 2021. Available at: <https://www.irishstatutebook.ie/eli/2021/act/32/section/15/enacted/en/html>

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Policy Area	Summary Assessment & Outlook	Relationship to the Draft First Revision to the NPF
	species are in decline in Ireland, mostly freshwater species. Agricultural activities remain the key pressure. The outlook is very poor, with climate change adding to challenges and cumulative impacts.	alignment of developments in planning and consenting regime for the marine environment. There will be an increasing focus on developing offshore renewable energy to provide renewable energy for transport, heating etc. however this cannot be at the expense of biodiversity. It is acknowledged that key pressures on biodiversity also include direct and indirect land use changes resulting from increased development, infrastructure rollout, and natural resource use. A growing population, as projected and being planned for under the draft first revision to the NPF, has the potential to lead to pressures on biodiversity and ecosystem services.
Waste & Circular Economy	<p>Assessment: Poor / environmental and/or compliance challenges to address</p> <p>Outlook: Partially on track to achieving full compliance or measures in place or planned that will improve the situation</p> <p>Ireland has made excellent progress in meeting its current EU targets. The generation of waste volumes however remains tied to economic activity which has been growing in recent years. Initiatives such as producer liability and waste prevention and recycling programs have also led to improvements and landfill needs have decreased while waste-to-energy capacity has increased. Challenges remain to shift from a linear economy to a circular one, with circular principles remaining low in Ireland.</p>	<p>The principles of the circular economy seek to maximise the efficiency of material use and reduce consumption patterns across society (including of both fossil and renewable fuel types). This will help reduce greenhouse gas (GHG) emissions and pollution to air, water and soils.</p> <p>The draft first revision to the NPF will be to support Ireland's transition to the circular economy. Compact growth and development focused within existing settlement envelopes aims to reduce material demands and pressures on greenfield sites, however there may be an increase in the amount of hazardous waste generated in the coming years where brownfield or previously industrialised sites are targeted for development. An growing population and planning for same also requires increased development such as, for example, social infrastructure, housing, modal options, energy infrastructure etc. There is an ongoing challenge to reduced embodied emissions in the construction sector, to move toward green building practices in the planning system, to make public/commercial and residential buildings more energy efficient and to reduce demand-side energy needs. The draft first revision to the NPF plans for projected population growth. The EPA's Final Greenhouse Gas Emissions 1990-2022 report (EPA, May 2024) states that Ireland's average GHG emission per capita over the last ten years were 12.7 tonnes. With recent CSO 2022 census data showing a population of 5.12 million people and with population projected to increase to 5.5 million in 2030, 5.9 million in 2040 and 6.2 million by 2050, per capita emissions need to reduce significantly in order to meet reduction targets. At current per capita emission levels, the EPA estimates that each additional 500,000 people would contribute an additional 6 million tonnes of CO₂eq annually.</p>

In addition, thirteen key State of the Environment (SOE) messages are outlined by the EPA for Ireland in order to protect the environment, health, and wellbeing. These comprise of the following:

- **SOE 1 – Environmental Policy Position:** The various links and dependencies between environmental policies and legislation could be reinforced, to lead to better overall environmental outcomes.

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- **SOE 2 – Full Implementation:** There needs to be an improvement in tracking plans and policies, as well as compliance with several directives and legislation. Continued targeting of non-compliances by environmental enforcement bodies is needed, as is improving coordination across different bodies.
- **SOE 3 – Health & Wellbeing:** Recognition that protecting and maintaining a good quality environment is directly linked to health and wellbeing. Protecting the environment from pollutants is important, as is access to green and blue spaces.
- **SOE 4 – Climate:** The response to climate change needs to be accelerated - we urgently need to act to transform our energy systems in order to meet national, European and international decarbonisation goals, and to limit global temperature increases.
- **SOE 5 – Air Quality:** Adoption of the WHO's air quality guideline limits as part of Ireland's Clean Air Strategy. This strategy is needed to combat air pollution, as the WHO limits are more stringent than the values at European level. Integrating these measures along with noise mitigation and climate action are also key related measures.
- **SOE 6 – Nature:** Biodiversity networks and nature must be protected and safeguarded as a national priority. Habitat and biodiversity loss continue. It is considered that the next Biodiversity Action Plan should be more ambitious.
- **SOE 7 – Water Quality:** Water pollution needs to continue to be addressed both locally and at catchment level, particularly to address the key impact, which is primarily nutrients. Measures should continue to be implemented to achieve WFD protection objectives for all water bodies through evidence-based measures, projects and research.
- **SOE 8 – Marine:** The target should be to reduce anthropogenic pressures on the marine environment. Given Ireland's large marine area, one of the largest in continental Europe, robust governance and planning is needed to ensure its protection.
- **SOE 9 – Clean Energy:** Ireland needs to rapidly decarbonise and move away from fossil fuel combustion across heating, electricity and transport, to a suite of clean energy systems.
- **SOE 10 – Environmentally-sustainable Agriculture:** A more integrated and holistic approach to farming alongside catchment-level water management is needed which reduces its environmental footprint and moves towards carbon neutral food production.
- **SOE 11 – Water Services:** Water and wastewater systems need to meet the needs of society while providing for a high-level of environmental protection in terms of abstractions and treatment of water/wastewater. National-level action is needed to address priority areas and shortcomings, as well as consideration given to climate impacts and the resiliency of infrastructure.
- **SOE 12 – Circular Economy:** The move to climate-neutral circular economy is urgently needed to preserve resources, reduce consumption, and reduce waste at all levels of society.
- **SOE 13 – Land Use:** Moving towards an integrated land use mapping approach is needed to support better decision making and promoting a better understanding of environmental issues and allowing for consideration of competing land use interests (e.g., preserving carbon sinks, tourism, land use planning etc.).

5.2.2 Northern Ireland

The second State of the Environment Report for Northern Ireland (2013) is titled *From Evidence to Opportunity* and provides a five year update and commentary on various indicators across a number of themes to provide an evidence-based assessment of the state of the environment. The Northern Ireland Statistics and Research Agency (NISRA) has published the Northern Ireland Environmental Statistics Report (NISRA, May 2024). This report provides an annual update to the figures and provides commentary around the trends outlined in the latest State of the Environment Report for Northern Ireland and is summarised in **Table 5-2**. References to transboundary impacts/effects are also noted through the baseline and assessments where relevant.

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Table 5-2: Summary of Current State of the Environment in Northern Ireland

Theme	Key Findings
Public Attitudes and Access to Nature	<ul style="list-style-type: none"> The level of public concern about environmental issues was high in 2023/24, with 78% cent very or fairly concerned about the environment. Climate change and illegal dumping of waste and litter were the biggest environmental concern for households (28% and 27% respectively) in 2023/24. The most common actions taken by households for environmental reasons in 2023/24 were reusing, recycling and disposing of waste products appropriately (91%), reducing food waste (74%) and reducing consumption of household utilities (65%). Pollution of air, land and water was considered to be the greatest threat to biodiversity for households (43%) in 2023/24. In April 2024, 47% of households had accessible natural space within 400m.
Climate Change	<ul style="list-style-type: none"> In 2021, Northern Ireland's greenhouse gas emissions were estimated to be 22.5 million tonnes CO₂ equivalent (MtCO₂e), a reduction of 23% since the baseline year of 1990. The sectors with the largest contributions in terms of emissions in 2021 were agriculture (28%), transport (17%) and residential (14%). Climate records suggest that the mean annual temperature has been steadily increasing since the end of the 19th century. The number of days per year where the temperature exceeded 20°C has also been increasing in the same timescale.
Air	<ul style="list-style-type: none"> Roadside nitrogen dioxide (NO₂) levels have decreased from 40.6 µg/m³ in 2012 to 23.7 µg/m³ in 2023. The mean nitrogen dioxide level for ten monitored sites was 26.7 µg/m³ in 2023. This was similar to the level reported in 2021 and 2022. In 2022 there was no breach of the UK Strategy Objective or The Air Quality Standards Regulations Limit Values of 40 µg/m³ for the annual mean concentration of particle matter (PM₁₀). The annual mean concentration of PM₁₀ across urban areas was 13 µg/m³ and the mean for the Lough Navar rural background monitoring site was 7 µg/m³. In 2021, of the ammonia emissions from agriculture, 86% came from livestock, 8% from the application of fertilisers containing nitrogen, and 6% from the application of other organic materials to land (sewage sludge and digestate).
Water and Marine	<ul style="list-style-type: none"> In 2023 soluble reactive phosphorus (SRP) was measured at 93 surveillance rivers across Northern Ireland giving an average concentration of 0.062 mg/l of phosphorus per litre of water (where the good status threshold is < 0.035 mg/l). Of the 25 inshore coastal water bodies delineated in Northern Ireland, 13 (52%) have been assessed at good or better ecological condition. In 2023, there were 1,851 water pollution incidents reported (compared to 1,535 in 2022), of which 821 (44%) were substantiated (confirmed) as having an impact on the water quality of the receiving waterway. One out of the nine designated shellfish water protected areas (SWPAs) complied with the Water Framework Directive guideline <i>E. Coli</i> standard in Shellfish Flesh in 2023.
Biodiversity and Land	<ul style="list-style-type: none"> By March 2023, 111,159 hectares (ha) across 394 sites were declared Areas of Special Scientific Interest (ASSI). 246,300 ha across 58 sites were declared Special Areas of Conservation (SACs) and 114,600 ha across 16 sites as Special Protection Areas (SPAs). 77,700 hectares across 21 sites were declared Ramsar sites (areas of wetland and waterfowl conservation), and 26,178 ha across five sites as Marine Conservation Zones (MCZs). In 2023/24, 55% of features within Marine and Terrestrial protected sites were in Favourable condition while 36% were in Unfavourable condition. The wild bird population indicator using 56 bird species shows decreased levels in 2022 compared to 1996. Bird populations peaked in 2005 and have been in decline since, driven principally by bird species found in farmland habitats. In 2023/24, 433 ha of new woodland (comprising 41 ha of conifer species and 392 ha of broadleaf species) were planted by NI Forest Service and private landowners supported by grant aid. Agri-environment schemes encourage farmers and landowners to manage their land to benefit the environment. At the end of 2023, 62,000 ha of land in Northern Ireland were under agri-environment scheme agreement
Waste	<ul style="list-style-type: none"> In 2022/23, the household waste recycling rate was 50.7%, representing a 0.6% decrease compared to 2021/22. The recycling rate for all waste collected, both household and non-household waste, was 49.7% in 2022/23.

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Theme	Key Findings
Historic Environment	<ul style="list-style-type: none"> In 2022/23, there were a total of 2,035 scheduled historic monuments protected under Article 3 of the Historic Monuments and Archaeological Objects (NI) Order 1995. Overall, there has been a 35% increase in the number of scheduled monuments since 2001/02. Listed buildings are those of special architectural or historic interest and provide an indication of the extent of this historical architectural resource. There has been a modest increase in the number of buildings listed in recent years, with a total of 9,072 statutory listings in 2022/23, an increase of 11% compared to 2003/04. Buildings that are classified as 'at risk' in Northern Ireland are recorded on the online Heritage at Risk in Northern Ireland (HARNI) register. In 2022/23, there were 1,037 historic buildings and structures on this database, an increase of 145 compared to 2021/22.

Source: NISRA (May 2024) Northern Ireland Environmental Statistic Report. Available at: <https://www.daera-ni.gov.uk/articles/northern-ireland-environmental-statistics-report>

5.3 Environmental Characteristics

The following baseline information is prefaced for each environmental discipline by clarification on the nature and extent of effects considered for that discipline in relation to the draft first revision to the NPF. The baseline information is then summarised in relation to the identified scope.

5.3.1 Population and Human Health

The baseline relevant to the draft first revision to the NPF in relation to Population and Human Health is as follows:

- Population trends including regional trends – historic and existing settlement patterns leading to unbalanced regional development; regional inequity; changing patterns and needs.
- Economic and employment opportunities – opportunities and skills development/ diversification (in particular in rural and coastal areas) particularly in terms of the 'Just transition'.
- Human health – increased pressure on and access to services; car dependency and associated air quality emissions; homelessness and rising demand for available and affordable housing; increased need of urban green space.

5.3.1.1 Population Trends

National and Regional Population Trends

In the national context, the preliminary results of the 2022 census show that the current population of Ireland is 5,123,536 as of June 2022, compared to the last Central Statistics Office (CSO) census count of 4,757,976 in 2016 (CSO, 2022)¹¹. The population of Ireland has generally been rising since the 1960s as a result of declines in emigration, an increase in birth rate and declining death rates.

The NPF in 2018 set out that the population of Ireland would increase by around one million people, or by 20% over 2016 levels, to almost 5.7 million people by 2040. The CSO states in their report *Population and Labour Force Projections 2017-2051* (CSO, 2018)¹² that the total population is predicted to grow to between 4.74 and 5.6 million over the period 2017-2051. The CSO predicts the average annual population growth rate during this period (taking account of fertility and migration) to be between 0.69 and 0.8%, compared to the 1.6% growth rate observed during the 2006-2011 inter-census period, and 0.7% between 2011 and 2016.

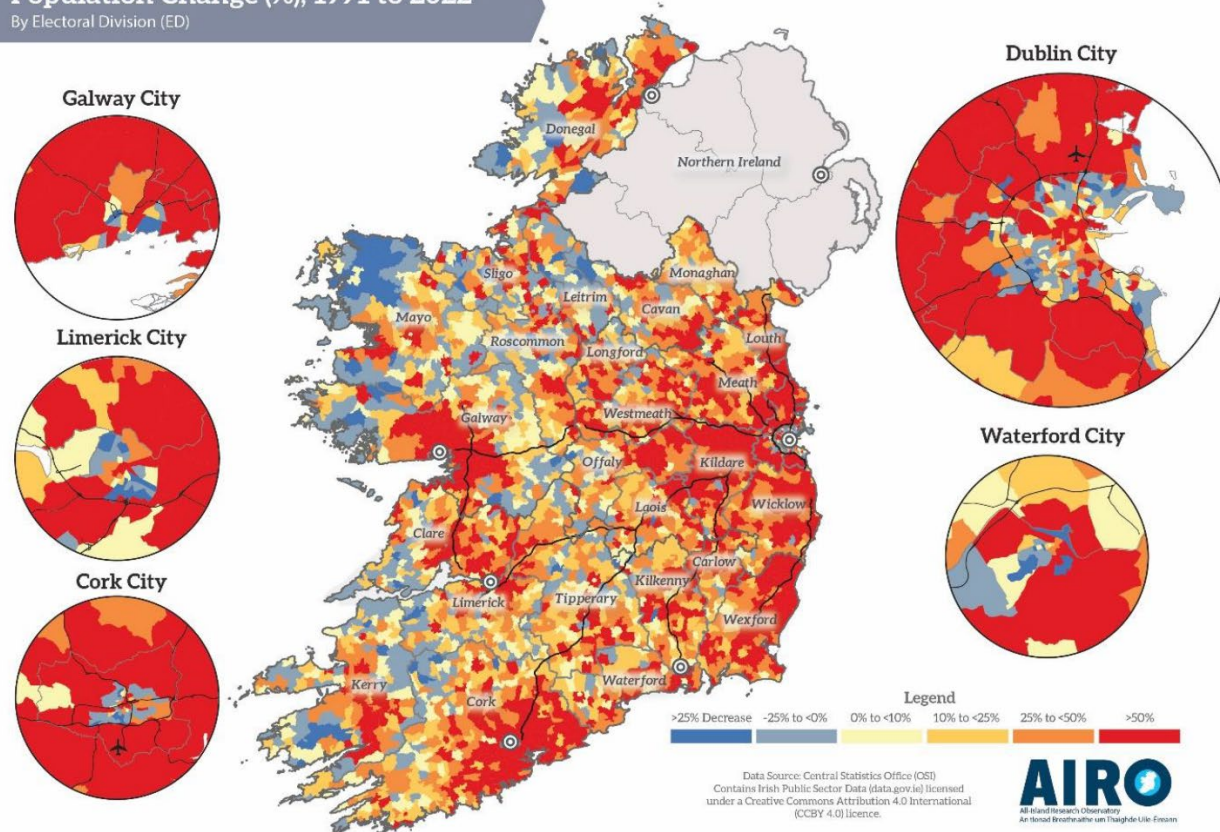
Figure 5.1 shows the percentage population change between 1991 and 2022. The figure indicates that there has been intense growth in the outskirts of the cities over the past 30 years.

¹¹ CSO (2022). Census of Population 2022 - Preliminary Results, CSO statistical publication, 23 June 2022. <https://www.cso.ie/en/releasesandpublications/ep/p-cpr/censusofpopulation2022-preliminaryresults/>

¹² CSO (2018). Population and Labour Force Projections 2017-2051. [Population and Labour Force Projections 2017 - 2051 - CSO - Central Statistics Office](#)

Population Change (%), 1991 to 2022

By Electoral Division (ED)



Source: All Island Research Observatory (AIRO), Maynooth University

Figure 5.1: Population Change (%), 1991 to 2022 (Source: Revision to the NPF Issues Paper)

In terms of the urban/rural divide, most of the population growth experienced between the last census years of 2011 and 2016 was in urban areas (80%). The population density of Ireland increased to 70 people per km² in 2016, compared to 67 people per km² in 2011, and 62 people per km² in 2006. Urban areas are more densely populated, averaging 2,008 people/km² compared to rural areas which average 27 people/km². Population density is highest in the Greater Dublin Area, which holds 28.5% of the state's population (CSO, 2017)¹³.

Current social trends in Ireland also demonstrate an increase in the number of private households, comparing 1,029,084 households in 1991 to 1,195,467 in 2016. Over the same period the average household size decreased from 3.3 persons per household to 2.75, mainly driven by the growing number of one person households and falling family size. As of 2016, there were a total of 442,669 one-off houses; this represents 26% of all occupied dwellings. Of the homes constructed since 2011, 40% of these were one-off houses (CSO, 2016)¹⁴. Compared to 1991, the number of housing units in Ireland has more than doubled from 1 million in 1991 to 2.1 million in 2022.

In terms of regional growth, each of the three regions (Eastern & Midlands (EMR), Southern (SR), Northern & Western (NWR)) are growing. The EMR performed above the average (8.7%) but also accounted for 56% of overall population growth nationally since Census 2016. The NWR and the SR grew less than the national average of 7.6% at 6% and 6.8%, respectively.

With regard to settlement patterns, outside of existing settlement envelopes, there continues to be a demand for the provision of single housing in the countryside. Single housing in the countryside is mostly developed privately whereas provision of social housing has largely occurred in cities, towns and villages. Scattered

¹³ CSO (2017). Census of Population 2016 - Profile 2 Population Distribution and Movements. [Population Distribution - CSO - Central Statistics Office](https://www.cso.ie/en/releasesandpublications/ep/p-cp1hii/cp1hii/od/)

¹⁴ CSO (2016). CSO Census of Population 2016 - Profile 1 Housing in Ireland. <https://www.cso.ie/en/releasesandpublications/ep/p-cp1hii/cp1hii/od/>

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development can contribute to spatial and social imbalances, where provision of services is made more difficult due to urban sprawl and the proliferation of linear/ ribbon developments. Population declines in smaller settlements have resulted in closed services and can lead to marginalisation and isolation of more vulnerable people.

Migration

In terms of migration, the average annual rate of growth for the migration component is highest in counties Longford, Meath, Leitrim, Roscommon and Waterford. The counties with the lowest annual average net migration include Kilkenny and Tipperary, both at 4 people per 1,000. There is significant volatility in migration trends, which while they tend to follow economic cycles have other less predictable factors, most obvious in recent years with the invasion of Ukraine and resulting humanitarian crisis; the CSO reports that 104,870 Personal Public Service Numbers (PPSNs) were given to arrivals from Ukraine between 4 March 2022 and 4 February 2024, under the Temporary Protection Directive¹⁵.

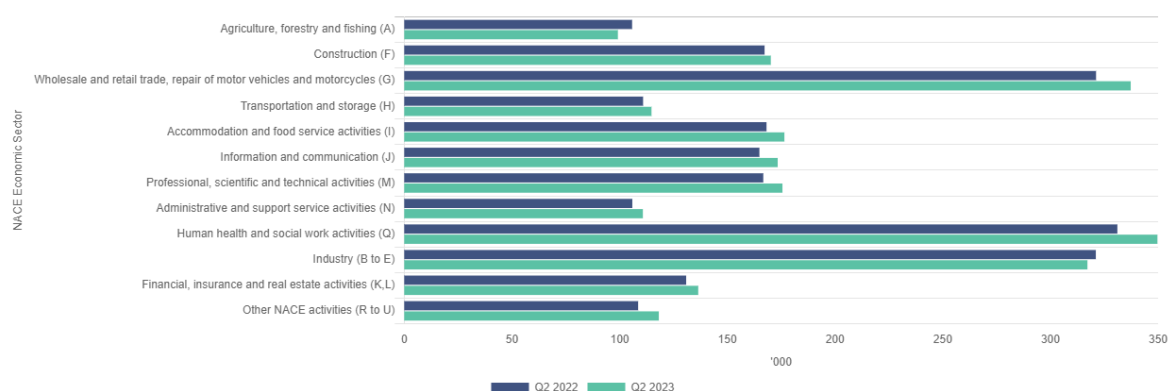
Census 2022 indicated a number of migration trends that may not have been predicted since the first NPF was published in 2018 – a substantial decline in the number of both Polish and UK migrants. These two countries represented the largest cohorts of migrants to Ireland (in combination comprising almost a third of all migrants).

The CSO reports in its *Ireland and the EU at 50* publication (CSP, 2023)¹⁶ that the number of immigrants in the year to April 2023 was estimated at 141,600, and that the number of emigrants over the same period was estimated to be 64,000; these estimates together show there was positive net migration (more people arriving than leaving) of 77,600 in the year to April 2023, which compares with 51,700 in 2022. The number of immigrants in the year to April 2023 was the highest since the year to April 2007. This number comprised 29,600 returning Irish nationals, 26,100 other EU nationals, 4,800 UK nationals, and 81,100 other nationals including Ukrainians.

5.3.1.2 Employment and Economic Aspects

The labour force in Ireland has grown between 2016 (2,304,037) and 2023 (2,643,000). There is a 3.5% increase (88,400) from 2,554,000 in Q2 of 2022, with increases of 25,900 (+1.9%) for males and 62,500 (+5.2%) for females. The economic sectors with the largest % year on year growth were *Public Administration and Defence* (+11.2%) and the *Human Health and Social Work Activities* sector (+5.6%). There were decreases in the level of employment for *Agriculture, Forestry and Fishing Sector* (-6.3%) and *Industry* (-1.2%); refer to **Figure 5.2** (CSO, 2023)¹⁷.

Figure 2.3 Persons aged 15 - 89 years in employment classified by NACE Rev. 2 Economic Sector, Quarter 2 2022 and Quarter 2 2023



© Central Statistics Office, Ireland
<https://data.cso.ie/table/QI.F03>

Figure 5.2: Employment by Economic Sector, Q2 2022 and Q2 2023 (CSO, 2023)

¹⁵ CSO (2024) Arrivals from Ukraine in Ireland. Available at: <https://www.cso.ie/en/statistics/population/arrivalsfromukraineinireland/> [Accessed June 2024]

¹⁶ CSO (October 2023) CSP Publication: 1973 – 2023: Ireland and the EU at 50. Available at: <https://www.cso.ie/en/releasesandpublications/ep/p-ieu50/irelandandtheeuat50/>

¹⁷ CSO (2023). Labour Force Survey Quarter 2 2023. Available at: [Employment - CSO - Central Statistics Office](https://www.cso.ie/en/statistics/employment/)

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Just Transition

The EU Just Transition Fund (EU JTF) was established under the EU Cohesion Policy across all member states with the purpose of mitigating “*the adverse effects of the climate transition by supporting the most affected territories and workers concerned and to promote a balanced socio-economic transition*” (EU 2021/1056)¹⁸. The fund sets out to assist territories in transitioning to a low carbon economy and society, in an effective and fair manner. Under the EU JTF, Ireland will receive up to €84.5 million for the period 2021-2027, as part of the aim to assist communities in territories that are negatively affected by the ‘Green Transition’. This aims to maximise employment opportunities and supporting people and communities that may be adversely affected by transition to a climate neutral economy.

On a national level, the fund will focus on the Midlands, where there have been impacts related to the transition away from fossil fuels with commercial peat extraction ending and peat-fire power generation winding down. The National JTF is already supporting 56 projects in the Midlands region with up to €22.1 million in committed grant funding until 2024. The EU Just Transition Fund Programme will deliver an additional €169 million in investment to the region in the period to 2030 (Government of Ireland, 2022)¹⁹. The EU JTF focuses on the following three priorities:

- Generating employment for former peat communities by investing in the diversification of the local economy;
- Supporting the restoration and rehabilitation of degraded peatlands and regeneration and repurposing of industrial heritage assets; and
- Providing former peat communities with smart and sustainable mobility options to enable them to benefit directly from the green transition.

Ireland’s EU JTF Programme recognises that certain economic sectors in the Midlands such as agriculture, peat harvesting and the energy industries, will feel impacts more acutely. Employers such as Bord Mona and ESB are undergoing transformational changes in their transition to a carbon neutral economy and this has had impacts on their workforces. Particular socio-economic cohorts will be more affected, as there is a higher prevalence of those with lower levels of education in peat dependent communities (Government of Ireland, 2022)¹⁹.

5.3.1.3 Human Health

The CSO publication *Ireland’s Health Survey* (2019)²⁰ is part of an EU-wide survey looking at general health indicators based on reporting from people aged 15 years and older. Health in Ireland is generally very good; 82% of people surveyed reported no limitations in their daily activities from a health condition, and 85% overall reported their health as being *good* or *very good*. There is also a clear socio-economic divide however, with 92% of *very affluent* people reporting *good* or *very good* health status compared to 78% of *very disadvantaged* people. Employed people are also more likely to report better physical and mental health.

An ageing population for Ireland and globally is also a significant trend. In Ireland, the number of people aged 65 and over has doubled since 1960, and the number of people over 85 has quadrupled over the last 50 years. As of 2022, there were approx. 1.04 million people in Ireland aged 60 and over.²¹ Counties Fingal, Kildare and Meath continued have the youngest age on average. Mayo, Kerry, Roscommon and Leitrim had the oldest populations.

The built environment is an important factor to people’s health and wellbeing. Health is also related to socio-economic factors. The Institute of Public Health (IPH, 2006) reports that people experiencing poverty tend to live in poor quality built environments and have a greater risk of exposure to adverse environmental circumstances²². The increase of indoor and sedentary lifestyles is also associated with increased risk of developing chronic health conditions such as obesity, heart disease and depression. Spatial planning plays

¹⁸ Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1056>

¹⁹ Government of Ireland (2022). Territorial Just Transition Plan. Available at: [Territorial-Just-Transition-Plan.pdf \(emra.ie\)](https://www.emra.ie/Territorial-Just-Transition-Plan.pdf)

²⁰ CSO (2020). Irish Health Survey. Available at: [Irish Health Survey 2019 - Main Results - CSO - Central Statistics Office](https://www.cso.ie/en/irish-health-survey-2019-main-results/)

²¹ Age Action. Reframing Ageing - The State of Ageing in Ireland 2022. <https://shorturl.at/bmqKM>

²² IPH (2006) Health Impacts of the Built Environment: A Review. Published by the Institute of Public Health in Ireland. Available at: https://www.publichealth.ie/sites/default/files/resources/Health_Impacts_of_the_Built_Environment_A_Review.pdf

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an important role here in terms of public transport options, connectivity, housing conditions and access to the natural environment. The over-reliance on the private car as a mode of transport has implications for health in terms of emissions to air (nitrogen oxides and particulate matter), particularly in urban areas, and 77% of the national vehicle fleet is comprised of cars.²³ Historically, this has also resulted in a proliferation of urban parking and the pushing of shopping and leisure services activity to the outskirts of towns. This legacy pattern has also been driven by local authority rates and a lack of mandatory objectives in regional planning which has shifted in more recent years with the introduction of the Regional Spatial and Economic Strategies.

These settlement patterns can lead to loss of footfall in town centres and a loss of local connectivity. Creating and maintaining a sense of place and providing options that encourage people to make healthier choices in terms of physical activity and use of alternative transport is essential to improving health and wellbeing.

Employment and income are among the most significant determinants of long-term health (Stronks et al., 1997; Institute of Public Health, N.D.)^{24,25}, influencing a range of factors including the quality of housing, access to and level of education, diet, lifestyle, coping skills, access to services and social networks. Communities which are subject to socio-economic deprivation are more likely to suffer from morbidity, injury, anxiety, depression and tend to suffer from higher rates of premature death than those less deprived.

5.3.1.4 Existing Environmental Pressures/ Problems: Population and Human Health

Population and demographic trends present a number of policy implications for the draft first revision to the NPF. Overall, population growth is slightly ahead of forecasts with strong migration trends, which will have to be considered when modelling the migration scenario for future population growth scenario. The results of the census also show an increasingly aging and diverse population.

The CSO reports in its latest population and labour force projections that the total population is predicted to grow to between 4.74 and 5.6 million over the period 2017-2051. Demographics will continue to change and evolve into the future and there will be more people over the age of 65. There is also an influence on population and demographics due to current and future potential for unforeseen changes in aspects such as migration influenced by domestic and external forces. These changes all place pressure on the provision of adequate services, particularly in the areas of housing, healthcare, and education. This in turn places demand and pressure on space, the provision of services as well as infrastructure.

The DHLGH Housing Delivery Tracker tool indicates that the majority of cities and large settlements are not reaching the housing targets set out in Development Plans, with the exception of towns in the extended hinterlands of Cork and Dublin. Ireland has also seen a historic trend in proliferation of one-off housing and scattered development. This makes the consolidated and consistent provision of services, as well as reaching 'critical masses' of population more difficult, as well as contributing to reliance on private vehicle transport.

It is also recognised that health and wellbeing are tied to a good quality environment. The overall quality of the Irish environment is generally good, but there are still issues that require further measures. The EPA's 2020 Report, Ireland's Environment – An Assessment⁷, state that key actions related to health and wellbeing managing the environmental and radiological risks to health from chemicals and other pollutants remains a major part of environmental protection. The report also state that green and blue spaces and quiet areas are important and need protection as they have benefits to health and wellbeing via connection to natural spaces.

A potential risk to human health comes from exposure to air emissions from a range of combustion sources and burning of solid fuels for space heating. There remains an over-reliance on private cars as the main mode of transport in Ireland. The EPA notes in the State of the Environment Report (2020)⁷ that the primary sources of concern in 2020 were emissions from road traffic and domestic space heating using solid fuels (refer also to **Section 5.3.5**).

²³ Department of Transport Bulletin of Driver Statistics 2022. Available at: <https://www.gov.ie/en/publication/f392d-bulletin-of-vehicle-and-driver-statistics/#2022>

²⁴ Stronks K, van de Mheen H, van den Bos J, Mackenbach JP (1997). The interrelationship between income, health and employment status. International Journal of Epidemiology, 26(3):592-600. DOI: <https://doi.org/10.1093/ije/26.3.592>

²⁵ IPH. Social Determinants of Health. Available at: <https://www.publichealth.ie/social-determinants-health> [Accessed June 2024]

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The concept of the just transition towards a climate-neutral society is also an important aspect; climate action has the potential to create additional employment opportunities, in particular in rural areas, in the future due to consumer consumption and green, circular economy, and just transition principles. However, it may also have the potential to cause the loss of amenity usage and access, for instance, with the transition away from peatland extraction activities.

The key environmental issues for draft first revision to the NPF are the following:

- Patterns old and emerging
 - Addressing historic and existing settlement patterns leading to unbalanced regional development;
 - Changing demographic patterns and needs e.g. increase in aging population;
 - Existing car dependency and associated air quality emissions; and
 - Behavioural change, lifestyle choices.
- Disparities in investment and economic structures
 - Potential employment opportunities and skills development/ diversification (in particular in rural and coastal areas) particularly in terms of the ‘Just transition’; and
 - Increased requirements for water, wastewater treatment and transport services to complement the population growth.
- Equity of access to services and quality of life issues
 - Increasing homelessness and rising demand for available and affordable housing;
 - Increased need of urban blue and green spaces with new housing developments;
 - Uneven distribution of health services and physical activity initiatives;
 - Access to education and childcare in certain areas; and
 - Avoidance of inequalities and deprivation of services.

5.3.2 Biodiversity, Flora and Fauna

Biodiversity is the variety and variability of plants (flora) and animals (fauna) in an area and their associated habitats. The importance of preserving biodiversity is recognised from an international to a local level. Biodiversity is important in its own right and has value in terms of quality of life and amenity. The natural environment is also critical in delivering ecosystem services such as providing clean air and water, food and raw materials and cultural benefits.

The EU’s 8th Environmental Action Programme to 2030 aims to protect and restore biodiversity, pursuing zero pollution to air water and soil, and reducing climate pressures. Ireland has obligations under EU law to protect and conserve biodiversity. This relates to habitats and species both within and outside designated sites. Ireland has produced its fourth National Biodiversity Action Plan (NBAP 2023-2030) covering the period 2023-2030, to address issues and halt the loss of biodiversity, in line with international commitments under the UN Convention on Biological Diversity (CBD), which Ireland ratified. The overall aim for Ireland’s BAP is “to deliver the transformative changes required to the ways in which we value and protect nature”.

The preparation of the draft first revision to the NPF has had regard to the EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, as amended (commonly referred to as the Habitats Directive), and Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (commonly referred to as the Birds Directive). These are transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 to 2021 (S.I. No. 477/2011, S.I. No. 499/2013, S.I. No. 355/2015 and S.I. No. 293/2021), as amended, and requires that any plan or project not directly connected with or necessary to the management of a European Site but likely to have a significant effect on such a site must undergo an appropriate assessment in view of best scientific knowledge and in view of the conservation objectives of the site.

The draft first revision to the NPF falls under the remit of these Regulations, and an Appropriate Assessment (AA) is being undertaken pursuant to these Regulations, with the Natura Impact Statement available under separate cover.

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The baseline relevant to the draft first revision to the NPF in relation to Biodiversity, Flora and Fauna is as follows:

- Ireland's biodiversity as a whole – influence of climate change, land-use change and ongoing pressure from population and economic growth e.g. recreation or tourism activities
- Protected Sites – International (e.g. Ramsar); European (e.g. Special Areas of Conservation (SAC), Special Protection Areas (SPA), and National (e.g. (p)NHAs);
- Protected habitats and species – terrestrial, freshwater and marine
- Invasive species – management and control of introduction and spread.

5.3.2.1 Designated Sites

Ireland has designated sites of conservation value and/ or concern in an effort to protect its biodiversity resource. **Table 5-3** outlines the various types of designation of these sites in Ireland. **Figure 5.3** shows the locations of SACs and SPAs, and **Figure 5.4** illustrates various key designated sites.

Table 5-3: Nature Designations in Ireland

Designation Type	Description	Number
International		
UNESCO Biosphere Reserve	Biosphere Reserves are areas of terrestrial and coastal/marine ecosystems, designated to reconcile the conservation of biodiversity with the quest for economic and social development and the maintenance of cultural values. They are internationally recognised within the framework of UNESCO's Programme on Man and the Biosphere. In Ireland these sites comprise Dublin Bay and Killarney National Park.	2
OSPAR Marine Protected Area (MPA)	MPAs have no single definition. They are generally understood to be geographically distinct zones for which conservation objectives can be set and are often established in an attempt to strike a balance between ecological constraints and economic activity, so that the seas may continue to allow for goods and services to be delivered. They may include existing SACs and SPAs, as well as other areas established under international or regional agreements (e.g. OSPAR, Helsinki Commission [HELCOM] etc.). The MSFD (2008/56/EC) requires Member States to use spatial protection measures, such as these MPAs, in their MSFD Programme of Measures, helping to contribute to a coherent network.	19
Ramsar	Ramsar sites are wetlands of international importance designated under the Ramsar Convention on Wetlands 1971, which Ireland joined in 1984. This intergovernmental treaty provides for national action and international cooperation for the conservation and wise use of wetlands and their resources with a particular focus on birds. Ramsar designations often overlap with SPAs.	45
Important Bird Area	The Important Bird Areas (IBA) Programme is a BirdLife International initiative aimed at identifying and protecting a network of critical sites for the conservation of the world's birds. BirdWatch Ireland is the BirdLife partner and is responsible for promoting and updating the status of Ireland's birds and their key sites.	140
National Park	National parks are areas that exist to conserve natural plant and animal communities and scenic landscapes, and which facilitate public access. They exist in accordance with international criteria established by the world conservation union (IUCN). To note the establishment of Boyne Valley as a National Park was announced in September 2023 ²⁶ .	8*
International Dark Sky Places	A certified Dark Sky Park is land possessing an exceptional or distinguished quality of starry nights and a nocturnal environment that is specifically protected for its scientific, natural, or educational value, its cultural heritage, and/or public enjoyment.	2

²⁶ [Press Release. New National Park established in Boyne Valley](#)

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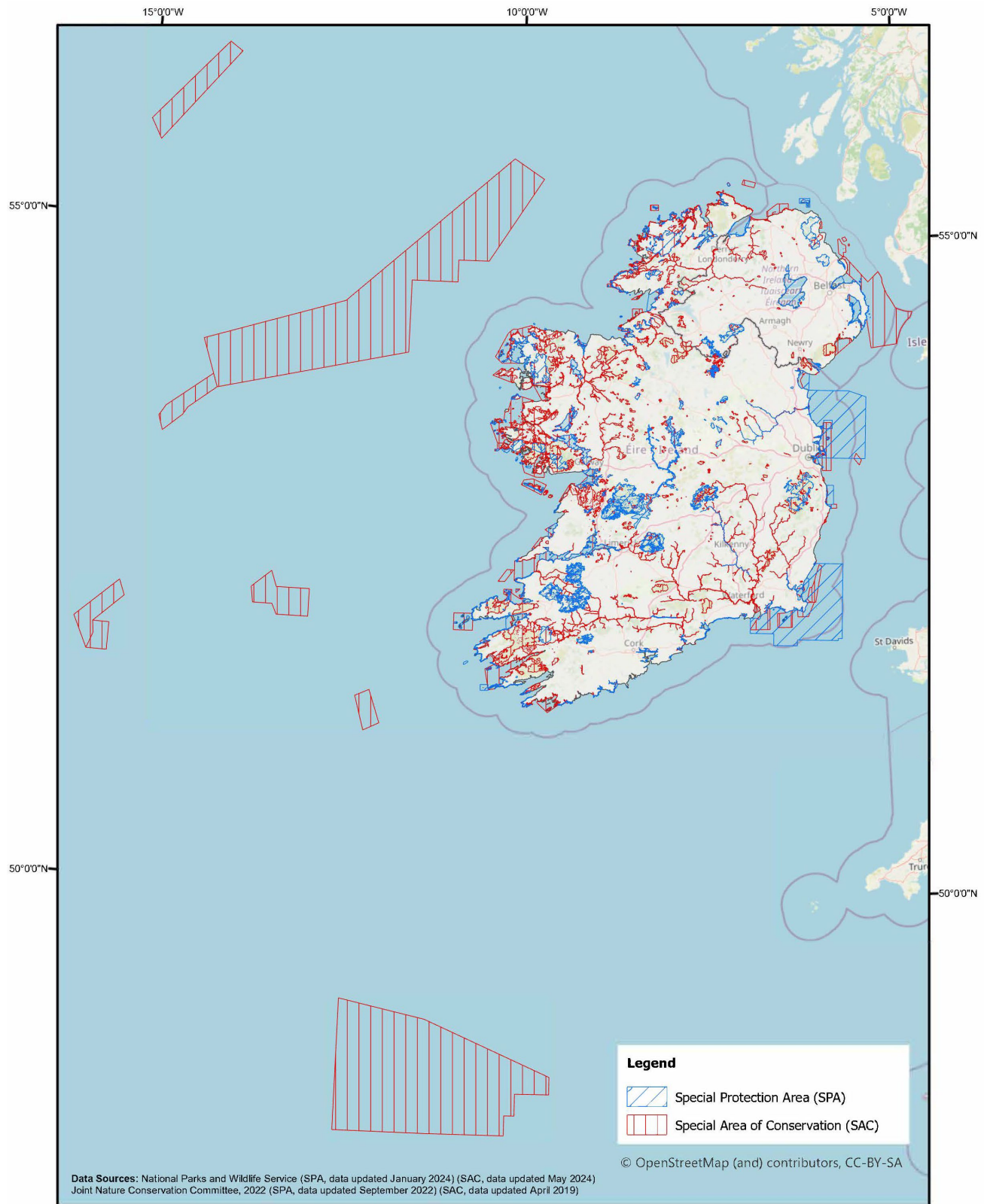
Designation Type	Description	Number
European		
Special Areas of Conservation (SAC)	Special Areas of Conservation (SAC) are designated under the EU Habitats Directive (92/43/EEC) and Special Protection Areas are designated under the Birds Directive (2009/147/EC). Together these sites form the backbone of the Natura 2000 network. Further details on these sites can be found in the NIS for the draft Plan.	433* + 8 offshore SACs
Special Protection Area (SPA)		165* + 2 offshore SPA
National		
Natural Heritage Area (NHA)	Natural Heritage Areas (NHAs) are protected under the Wildlife Amendment Act 2000. NHAs are areas considered important for the habitats present or which hold species of plants and/ or animals whose habitat needs protection.	155*
Proposed Natural Heritage Area (pNHA)	Proposed Natural Heritage Areas (pNHAs) were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats.	1,085*
National Nature Reserve	A National Nature Reserve is an area of importance to wildlife, which is protected under Ministerial order. Most are owned by the State, but some are owned by organisations or private landowners. The NPWS provides an online spatial viewer displaying the National Parks and Nature Reserves.	80
Marine Nature Reserve	Lough Hyne, Co. Cork is the one Marine Nature Reserve designated under the Wildlife Acts. The directives require that habitats and species listed in them are maintained, or if necessary restored, to favourable conservation status.	1
Refuge for Fauna	Refuges for Fauna are designated by ministerial order under Section 17 of the Wildlife Act 1976 as amended by Section 28 of the Wildlife (Amendment) Act 2000.	7
Wildfowl Sanctuary	A Wildfowl Sanctuary is an area that has been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed.	68*

*Numbers retrieved from the NPWS website (www.npws.ie and nationalparks.ie) June 2024.

In Northern Ireland, as part of their UK national site network, there are 58 including onshore and offshore SACs. There are 16 SPAs, 21 Ramsar and 394 Areas of Special Scientific Interest (ASSIs)²⁷. ASSIs are areas of land with national conservation value (See NIS for details of SACs and SPAs).

²⁷ [Press Release. New National Park established in Boyne Valley](#)

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**Figure 5.3****SACs and SPAs in Ireland and Northern Ireland**

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Project
National Planning
Framework Revision 2024

Client
Department of Housing,
Local Government
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Issue Details		
Drawn By: MV	Project No. IE000860	
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Figure 5.3: Special Areas of Conservation and Special Protection Areas in Ireland and Northern Ireland

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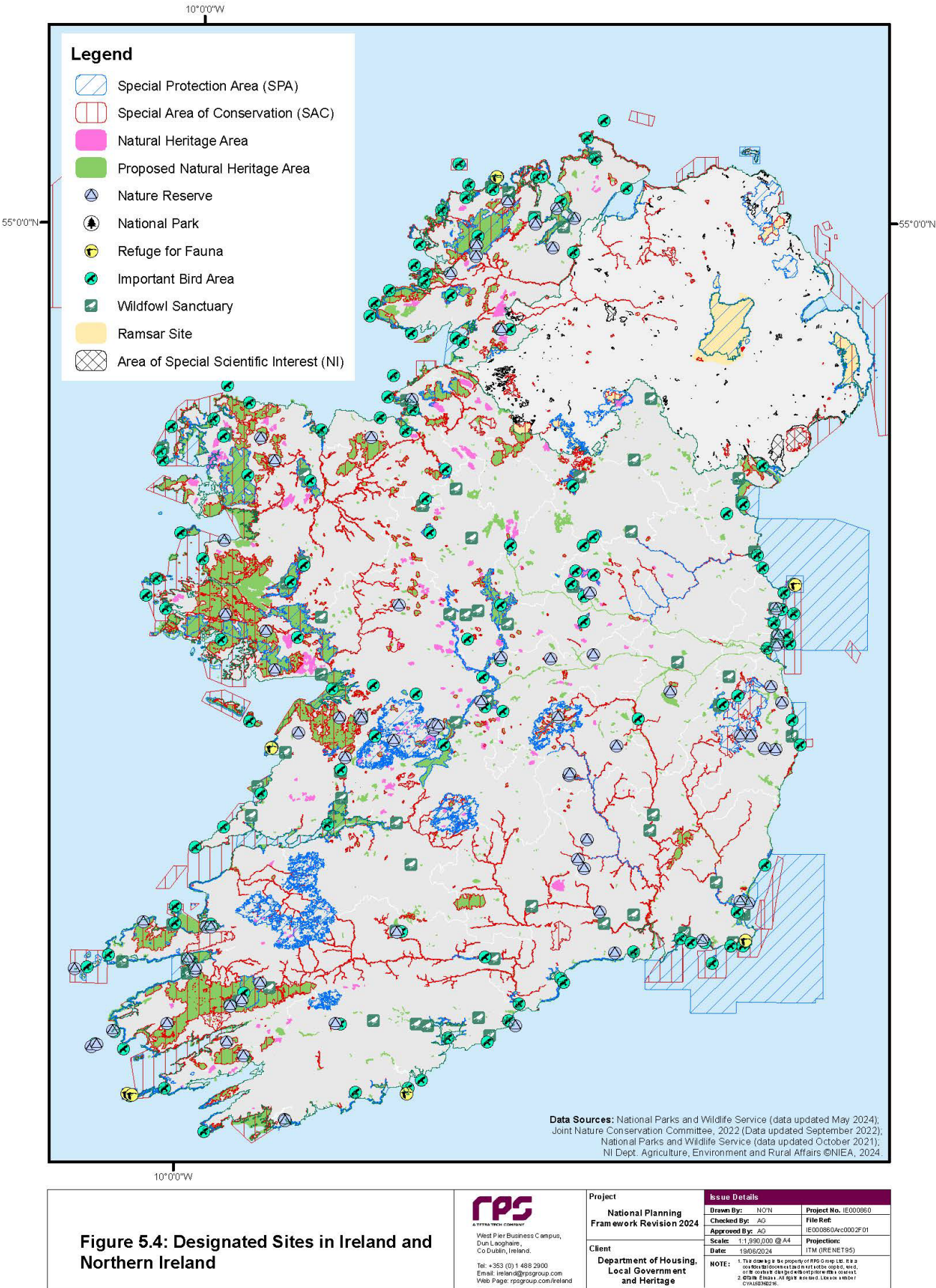


Figure 5.4: Designated Sites in Ireland and Northern Ireland

Figure 5.4: Designated Sites in Ireland and Northern Ireland

5.3.2.2 Natural Habitats and Protected Species

In 2007, 2013 and again in 2019 the National Parks and Wildlife Service (NPWS) published a report detailing the conservation status in Ireland of habitats and species listed in the EU Habitats Directive (92/43/EEC), often referred to as '*the Article 17 Report*'²⁸. Under the Habitats Directive, each Member State is obliged to undertake surveillance of the conservation status of the natural habitats and species in the Annexes and under Article 17, to report to the European Commission every six years on their status and on the implementation of the measures taken under the Directive.

For the 2019 submission, Ireland's Article 17 Report recorded 15% of habitats as '*favourable*', 46% as '*inadequate*' and 39% as '*bad*'. The draft first revision to the NPF encompasses a wide land use policy base covering many different sectoral activities. Many development and infrastructural activities that are supported by the policy base will require some form of land use change or land footprint; a key issue for biodiversity in general is fragmentation of habitats, disturbance to species, and environmental effects to air soils and water from general human and development activities. Therefore, the broad issues for protected sites in Ireland are summarised from the Article 17 report as follows:

- Many Irish habitats are in unfavourable status. Many are still declining albeit with some positive actions underway while almost half are demonstrating ongoing declines.
- The main pressures to habitats are from grazing; pollution of watercourses; drainage / cutting of peatlands and wetlands; invasive species; recreation; urbanisation; fertilizer application; and road building, among others.
- Many freshwater habitats are considered unfavourable due to nutrient loading within catchments. Some of the marine habitats are considered to be improving, and to have better prospects, due in part to implementation of other EU environmental directives. However only five of the 23 coastal/marine habitats have favourable status. The key pressures are nearshore eutrophication, loss of key species (e.g. seagrass and maërl), anthropogenic impacts and invasive species.
- The status of raised bogs in Ireland is '*bad*'; and the trend is for an ongoing decline as restoration is necessary to cause improvement, notwithstanding the cessation of cutting on SAC bogs. However, The National Raised Bog Special Areas of Conservation Management Plan 2017- 2022 sets out a commitment for protection and restoration activities within all raised bog SACs while Bord na Móna has formally ended all harvesting of peat on its lands as of 2020.
- Blanket bog is also assessed as '*bad*'; the report notes that, as one of the main impacts on this habitat is grazing, an improving trend might be expected due to the implementation of Commonage Framework Plans. However, this improvement appears to be offset and even exceeded by on-going deleterious effects such as peat cutting, erosion, drainage and burning.
- A number of lake habitat types are at '*inadequate*' and '*bad*' status. The key impacts are from eutrophication (both nutrient and organic pollution), primarily from agriculture and municipal/industrial wastewaters; phosphorus in groundwater is also a significant concern in some areas. Drainage, forestry and peat extraction activities are also key pressures.
- Grasslands, such as orchid-rich grasslands and hay meadows, have undergone significant losses over the last decade, with 31% and 28% of the area monitored reported as being lost. Some improvements have been associated with the Burren Programme and Aran LIFE.
- Although some woodlands are rated as '*bad*' because they are patchy and fragmented, improvements have been noted due to afforestation, the planting of native species, the removal of alien species and control of overgrazing. Improvements noted from 2013 are now recorded as stable in 2019.
- Losses of limestone pavement has been recorded outside the SAC network, however the BurrenLIFE and Burren Farming for Conservation Programme have significantly improved the quality of pavement and its associated habitats.

From the 2019 report, 57% of species were assessed as '*favourable*', 15% as '*inadequate*', 15% as '*bad*' and 13% as '*unknown*' or considered to be vagrant species. Among the key findings are:

²⁸ NPWS (2007, 2013 and 2019). Article 17 Overview Reports. Available at: <https://www.npws.ie/publications/article-17-reports>
[Accessed: June 2024]

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- Otter, pine marten and many bat species have also been assessed as ‘favourable’ with evidence of an expanding range.
- The Natterjack toad is not exhibiting adequate positive results but has gone from ‘bad’ in 2013 to stable in 2019.
- Salmon (*Salmo salar*) is assessed as ‘inadequate’ and the Killarney shad (*Alosa killarneyensis*) is still assessed as ‘favourable’, but some other fish remain at ‘bad’ status, such as Twaite shad.
- Freshwater pearl mussel is ‘bad’ and declining.

Similarly, the requirements for reporting under Article 12 of the Birds Directive (2009/147/EC) are every six years. Ireland’s Article 12 submission to the EU Commission on the *Status and trends of bird species (2008-2012)* (European Commission)²⁹ covers 196 species which includes breeding, wintering and passage species.

The report details that some species have had significant increases in population over the long term, including raven (*Corvus corax*), collared dove (*Streptopelia decaocto*), buzzard (*Buteo buteo*) and blackcap (*Sylvia atricapilla*). However, other species have undergone significant declines in their long-term breeding population trend: corncrake (*Crex crex*) (85%), curlew (*Numenius arquata*) (98%), lapwing (*Vanellus vanellus*) (88%) and redshank (*Tringa totanus*) (88%).

The hen harrier (*Circus cyaneus*) shows a long-term population trend decrease of 27%. The results confirm that there is a need for measures to halt the declines noted above, most of which are due largely to changes in farming practices and intensity, and also the increase of activity in extensively farmed uplands through forests and wind farm construction.

Marine Habitats and Species

Ireland’s draft BAP includes as one of its actions: “*The protected area network will be expanded to include the DHLGH will enact and implement comprehensive legislation enabling the designation and management of Marine Protected Areas (MPAs) and the expansion of Ireland’s network of area-based conservation measures in the coastal and marine environment.*” The protection of the marine space is foreseen to be achieved through the implementation of existing directives and legislation. Pressures from human activities on Ireland’s coastal and marine biodiversity and ecosystem services arise from a growing range of sources including nutrient and chemical discharge from human activities (for example from industry, agriculture, municipal wastewater) and through direct physical disturbance e.g. from shipping, recreation and aquaculture; and habitat degradation from pollution, litter, artificial noise and light.

Flora and Fauna under the Wildlife Act

The Wildlife Act 1976 to 2010 (as amended) is the principal national legislation underpinning the protection of fauna and flora and nature conservation in the Republic of Ireland. All bird species, and a number of animals and flora are afforded protection under the Act. The Act also provides statutory protection for NHAs.

Plant Species under Flora Protection Orders

The current list of plant species protected by Section 21 of the Wildlife Act, 1976 is set out in the Flora Protection Order (S.I. No. 235 of 2022). It is illegal to cut, uproot or damage the listed species in any way. In addition, it is illegal to alter, damage, or interfere in any way with their habitats. This protection applies wherever the plants are found and is not confined to sites designated for nature conservation. The list includes vascular plants, mosses, lichens and stoneworts. Location of these plant species are to be included in spatial plans, such as County Development Plans (CDPs) and/or Local Area Plans (LAPs) etc.

Ecological Corridors

Stepping stones and ecological corridors can include nature conservation sites (other than European sites), habitat areas and species’ locations covered by the wider obligations of the Habitats Directive. It is also recognised that non-designated receptors, such as landscape features, can function as ecological stepping stones or corridors, which are of importance to wildlife.

There is a diversity of habitats (e.g. woodlands, hedgerows, field boundaries, sand dunes, saltmarshes, rivers, streams and associated riparian zones, canals, marine habitats and wetlands) that are not subject to legislative protection although they are of high biodiversity and conservation value and contribute to the

²⁹ European Commission (2009). The Birds Directive http://ec.europa.eu/environment/nature/knowledge/rep_birds/index_en.htm

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concept of 'green infrastructure'. Soil itself is a finite natural resource that underpins much of terrestrial biodiversity and contributes to aquatic biodiversity also (e.g., as riparian zones and buffer strips around watercourses).

Invasive or Alien Species

A further consideration as part of exploration or development activities relates to the potential for spread of invasive species. Invasive or alien species (IAS) are species that are transported outside of their natural range across and ecological barriers as a result of human action. They can establish and spread in their new location and cause negative impacts on biodiversity, society, and the economy. EU has implemented Regulation 1143/2014 on Invasive Alien Species³⁰ that requires Member States to address the threats posed by IAS to respective ecosystems.

Impacts associated with IAS in Ireland include competition with native species, alteration to habitats, introduction of pathogens and parasites and economic loss. If an invasive species, e.g., giant hogweed, Japanese knotweed, becomes established it can be difficult or in some cases nearly impossible to eradicate.

The majority of the known accidental introductions of IAS to Irish waters have occurred via shipping (commercial and recreational) or as passengers with aquaculture stock. Terrestrially, IAS can be spread via escapees from horticulture/non-native planting, vehicle movements (from tyres), redevelopment of industrial areas/ regeneration activities etc. Identifying non-native species and determining the route of introduction of such species is often very difficult, because its presence is only likely to be noticed once it has become established.

Ireland's NBAP 2023-2030 states that the occurrence and spread of invasive and non-native species in Ireland is increasing for all environments. Invasive species include the grey squirrel, zebra mussel, and Pacific oyster can displace native species and alter biodiversity and therefore ecosystem processes. To date, the majority of invasive species in Ireland have included plants such as Japanese knotweed, Himalayan balsam, giant hogweed, giant rhubarb, and floating pennywort, but the future trends may be towards vertebrate and invertebrate animals comprising a greater proportion of new invasive arrivals. The direct annual cost of invasives in Ireland is estimated to cost the economy over €200 million annually^{31,7}.

Biodiversity and Climate Change

The Intergovernmental Panel on Biodiversity and Ecosystem Service (IPBES) in 2019 declared a 'biodiversity crisis', one that is occurring in tandem with the climate crisis. IPBES global assessment report on the state of the world's biodiversity and ecosystem services (IPBES, 2019)³² states that nature and biodiversity is declining rapidly on a global scale, with the rate of species extinction accelerating, which will have subsequent impacts on ecosystem services and the people who depend on them.

The first NPF was published in 2018. Since that time, Ireland's BAP 2023-2030, finalised in January 2024, gives an outline of the state of biodiversity in Ireland:

- There has been a general reduction in the numbers of insects in Ireland; one in three bee species is faced with extinction.
- The latest BirdWatch Ireland review of Birds of Conservation Concern states that 63% of species (including common birds such as house sparrows and starlings) have declined at alarming rates.
- The latest Article 12 reporting under the EU Birds Directive on the long-term status and trends of Ireland's bird species reports population declines of 9% and 24% for breeding and wintering taxa respectively.

³⁰ Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014R1143>

³¹ Kelly, J., Tosh, D., Dale, K. and Jackson, A., 2013. The Economic Cost of Invasive and Non-Native Species in Ireland and Northern Ireland. Available at: https://invasivespeciesireland.com/wp-content/uploads/2010/07/Economic_Impact_Assessment_FINAL_280313.pdf

³² IPBES (2019): Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn, Germany. 1148 pages. Available at: <https://doi.org/10.5281/zenodo.3831673>

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- The latest Article 17 (2019) conservation status assessments under the EU Habitats Directive reports that 46% of protected habitats and 15% of protected species in Ireland demonstrated ongoing declines over a 12-year period with freshwater species most at risk. However, many mammal species such as seals, dolphins, several whale and bat species were assessed favourably.
- Approximately half of Ireland's rivers and lakes are at less than Good ecological status under the Water Framework Directive, with the main significant pressures being nutrient inputs from urban wastewater discharges and agricultural source.

Climate change is a rising threat year on year, particularly due to ongoing changes in the temperature and the decrease of precipitation (EEA, 2022)³³; climatic factors are discussed in detail in **Section 5.3.6** below. Climate change is already affecting habitats and species in Europe, with increased temperatures, droughts, changes in rain patterns, wildfires and less snow. It is seen as an emerging threat to European habitats and species. Amphibians, birds and bats are the most affected species by droughts and changes in rain patterns. In some cases, sector activities and developments which mitigate certain environmental effects, such as development of renewable energy in order to decarbonise the energy system, can result in harm on habitats and species. For example, wind turbines can create a threat to bats and birds, which can collide with the blades, and hydromorphological changes (e.g. creation of flood defences, hydropower development etc.) can block the passage of sediments and migratory fish. It is crucial, therefore, that all measures towards decarbonisation are taken in a coordinated manner with biodiversity policies, to minimise the impacts on habitats and species. There are many good solutions that benefit both climate and nature, such as improving the state of soils (EEA, 2021)³⁴.

5.3.2.3 Existing Environmental Pressures/ Problems: Biodiversity, Flora and Fauna

Ireland's NBAP 2023-2030 states that biodiversity is of intrinsic value as ecosystems help to regulate the world's climate, as well as influencing 'micro-climates'. Much of society depends of ecosystem services to provide food, water, goods and products (wood etc.), and ecosystems also help to regulate the water cycle on the planet. Changing climatic factors are also bringing challenges and threats/pressures for biodiversity and ecosystems in the form of droughts, severe weather events, loss/fragmentation of habitats, disturbance of species, proliferation of invasive species outcompeting native species as ecosystem niches are affected etc.

Worldwide, over 60% of ecosystem services are being degraded or used unsustainably and this affects natural capital, resource use and climate change resiliency. Habitat degradation, climate change, pollution and invasive or alien species threaten an average of 25% of animals and plants worldwide and up to one million species face extinction as a result according to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

In the Irish context, the National Biodiversity Data Centre (NBDC) highlights the serious deterioration in the health of Ireland's ecosystems, with the majority of protected habitats in poor or inadequate condition, and with 14% of species considered to be endangered (NBDC, 2023)³⁵. The NBDC further notes that while 31,000 species are known to occur in Ireland, the conservation status of approximately 10% has been assessed, which points to a large data gap in understanding the nature and scale of the issues, threats and pressures affecting Irish biodiversity and ecosystems.

The main drivers and pressures on nature in Ireland reported by the EPA in their most recent assessment of Ireland's Environment (2020) include the rapid loss of biodiversity and changes to habitats in general at international level, with many habitats and species having less than favourable conservation status at EU level. The conservation status of 46% of habitats under the EU Habitats Directive dis-improved between 2013 and 2019; 46% of habitats are assessed as '*inadequate*' and 39% are '*bad*'. Of the species assessed, 15% are assessed as '*bad*' and 13% as '*unknown*'. Agricultural activities and land use changes remain key pressures. The outlook is very poor, with climate change adding to challenges and cumulative impacts. The

³³ EEA (2022) *State of nature in the EU*, EEA Report No 10/2020. European Environment Agency [State of nature in the EU — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/state-of-nature).

³⁴ EEA (2021) *What is harming Europe's nature?* European Environment Agency [Europe's nature under pressure — challenges and solutions — European Environment Agency \(europa.eu\)](https://www.eea.europa.eu/nature-under-pressure)

³⁵ NBDC (2023). IPBES and Ireland's Biodiversity Crisis [IPBES & Ireland's biodiversity crisis - National Biodiversity Data Centre \(biodiversityireland.ie\)](https://www.biodiversityireland.ie/).

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2019 reporting does however note that 17% of species have shown an improving trend and 55% are assessed as being stable.

In this context, the key issues and challenges impacting biodiversity, flora and fauna of relevance to the draft first revision to the NPF include:

- Effects on protected areas: International (Ramsar sites), European (e.g., SACs, SPAs) and National (e.g. (p)NHAs) arising from activities and development related to spatial and land use planning.
- Protecting and enhancing biodiversity as a whole on a national, regional, and local level via support at national land use planning level to ensure consideration of biodiversity is built into planning considerations at all levels.
- Effects on water (particularly groundwater) dependent habitats and species.
- Effects on flora and fauna, (including migratory bird species, invertebrates etc.) and habitats.
- Potential for habitat loss and fragmentation.
- Effects on Freshwater Pearl Mussel, salmonids, other protected fish and shellfish species.
- Effects on sensitive habitats, e.g., peatlands, limestone habitats.
- Invasive species management e.g., invasive species cost the Irish economy an estimate €200 million annually, and climate change may create new niches and pathways for introduction or spread of invasive species. Invasive species may be spread via development activities (e.g. during construction) or via tourism and recreational activities (e.g. boating, fishing etc.).
- Impact on high status sites and protection of high-status sites.
- Uncertainty regarding the nature and scale of climate changes effects on many protected species and habitats in Ireland.
- The majority of Ireland's species have not been assessed for their conservation status pointing to a general knowledge gap on understanding Ireland's biodiversity.
- Global and national challenges of the 'triple planetary crises' of climate change, biodiversity loss and pollution.
- Influence of climate change and land-use change, along with ongoing pressures from population and economic growth e.g., development, recreation or tourism activities, as well as land-use change that is degrading habitats and ecosystem services, and over-exploitation of natural resources.

5.3.3 Land and Soils

The baseline relevant to the draft first revision to the NPF in relation to Land and Soils is as follows:

- Future land requirements and land use change – cumulative with other sectors such as agriculture and forestry and cross-sectoral for climate measures / actions from ongoing commitments in the Climate Action Plan.
- Geo-heritage.
- Soil function – loss as a result of erosion, pollution, compactions; Importance to prime agricultural land.
- Opportunities to preserve and protect natural carbon sinks e.g., peatlands, wetlands, forests.

5.3.3.1 Soils

The EC's 8th Environmental Action Program (EAP) to 2030 has acknowledged that degradation of soil is a serious problem. The 7th EAP proposed that by 2020 all land in the EU should be managed sustainably and soils afforded protection, with remediation of contaminated sites laid out as a priority. During development soils may be disturbed, moved, sealed-in, compacted (e.g., from heavy machinery operations), eroded or lost to water, which can occur from e.g. the siting of infrastructure. The EC also recognises that degraded soils have less resilience to changing environmental conditions and can provide less ecosystem services (such as food production, water retention/flood management, soil carbon retention, timber production etc.). In July

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2023, the EC adopted a proposal for a Soil Monitoring Law; which would provide a legal framework to help achieve healthy soils by 2050.

The quality of soils in Ireland is considered generally good and Teagasc have indicated that 57% of soil samples had a pH at or above 6.3, considered optimal for agricultural use while reducing the need for fertilisers. There are pressures impacting on the long-term protection and maintenance of soil and soil quality, particularly from soil sealing, compaction, erosion, decline of organic matter content, salination and landslides. In the Irish context, the EPA's State of the Environment report, Ireland's Environment – An Assessment (EPA, 2020) states that the main soil quality pressure in Ireland relates to soil sealing, and one of the key reasons for this is the presence of a dense road network⁷. It also states that urbanisation and buildings account for some of the biggest losses of soil areas in Ireland, with soil compaction also a recognised key threat to the quality of Irish soils. Compaction can lead to increased surface run-off, flooding, erosion and transport of nutrients and agrochemicals to open water.

5.3.3.2 Land

Land Use

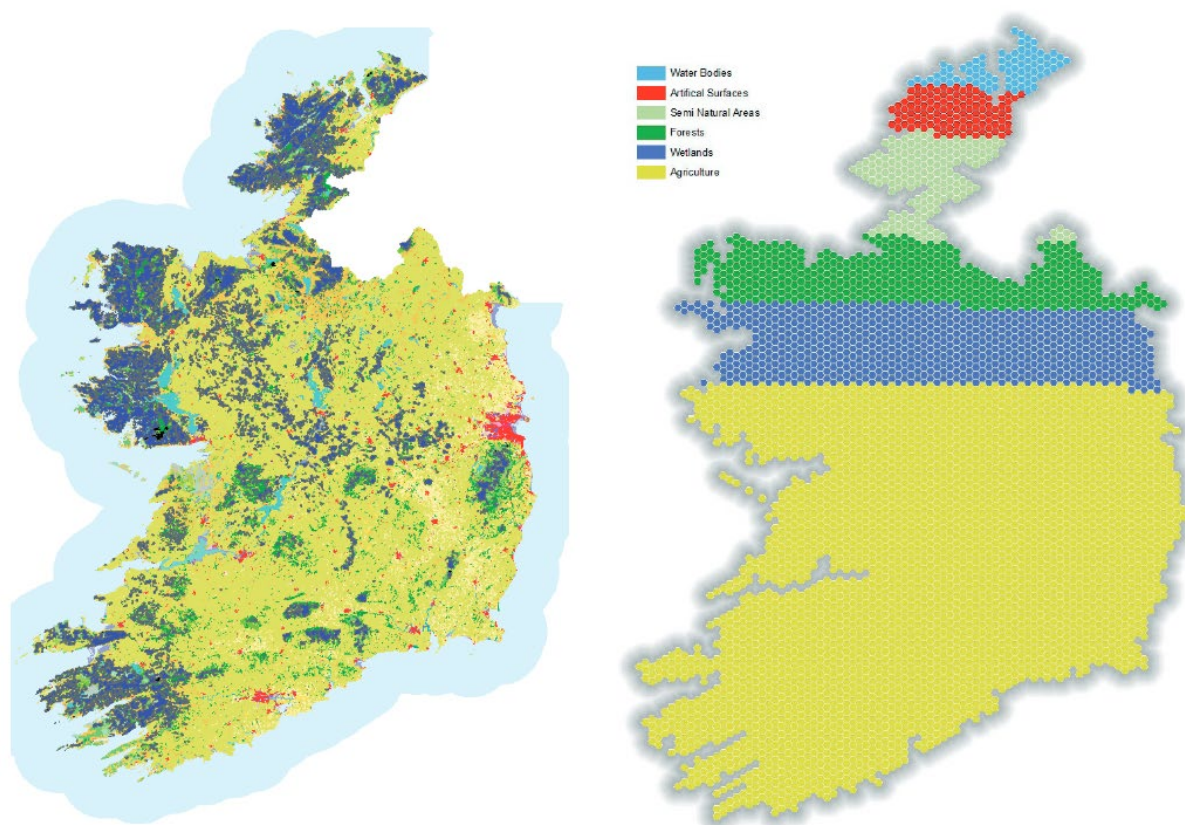
The main source of national-scale information on land cover in Ireland is the EEA / EPA CORINE land cover data series, which is an EU-wide inventory of land cover in 44 classes categorised from satellite photography. It should be noted that the smallest amount of land analysed under the study is 25 hectares, therefore features smaller than this are not currently discernible at the resolution of CORINE. The EPA does however undertake some adjustments to better reflect Ireland's land cover and there are plans to increase the resolution to 0.1 ha from 2021. The first CORINE dataset was produced in 1990, thereafter updated by the EEA every six years. More recently, a new National Land Cover (NLC) Map has been produced for Ireland that maps out land cover classes in much greater detail than CORINE. This was produced by the National Mapping Division (formerly known as the Ordnance Survey Ireland) of Tailte Éireann in partnership with the EPA.³⁶

The main land cover type in Ireland is agricultural land, which accounts for approximately two-thirds (67%) 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 (about 17%) of the country, while forested areas cover about 10% of the country. The classes for artificial surfaces and built ground encompass features such as urban fabric, ports, road/rail networks and extraction sites etc. Overall, this class covers just 2.4% of the country (CORINE, 2018³⁷). Wetlands and forestry also represent a high proportion of land use cover, at 14.9% and 9.5%, respectively (EPA, 2023)³⁸; refer to Figure 5.5.

³⁶ National Land Cover Map for Ireland. <https://www.epa.ie/our-services/monitoring--assessment/assessment/mapping/national-land-cover-map/>

³⁷ CORINE (2018). CORINE Landcover 2018. [Corine Landcover 2018 - Datasets - data.gov.ie](https://data.gov.ie/dataset/corine-landcover-2018)

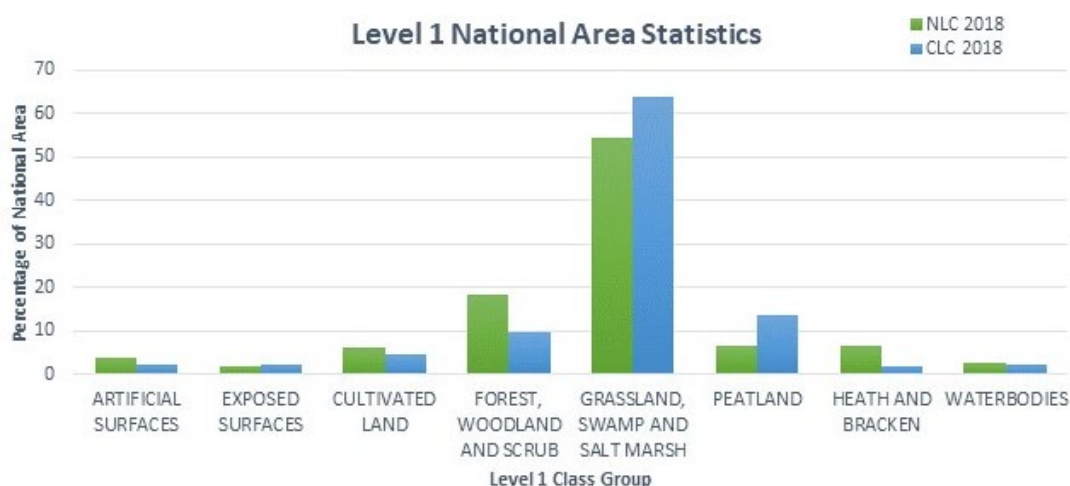
³⁸ EPA (2023). EPA Land use and land cover. [Current trends: Land and soil | Environmental Protection Agency \(epa.ie\)](https://www.epa.ie/our-services/monitoring--assessment/assessment/mapping/national-land-cover-map/)



Source: Figure 2.1, EPA (2023) Land Use Evidence Review Phase 1 Synthesis Report. Available at: <https://www.gov.ie/en/publication/f272c-land-use-review-phase-1/>

Figure 5.5: CORINE Land Cover (2018) [left] and Proportion of Ireland covered by each land cover type [right]

However it should be noted that the new National Land Cover Map, when compared to the CORINE 2018 data (see **Figure 5.6**), highlights the coarser CORINE data has overestimated the land area of some land cover classes (e.g. Grasslands and Peatlands) and underestimated other classes (Forest Areas, Cultivated Land, Heath and Bracken, and Artificial Surfaces), mainly as a result of the greater mapping resolution available with the NLC Map.



Source: EPA National Land Cover Map. Available at: <https://www.epa.ie/our-services/monitoring--assessment/assessment/mapping/national-land-cover-map/>

Figure 5.6: Comparison of Land Cover Classes under CORINE (2018) versus the National Land Cover Map (2022)

5.3.3.3 Land Use, Land Use Change and Forestry

Land Use Change

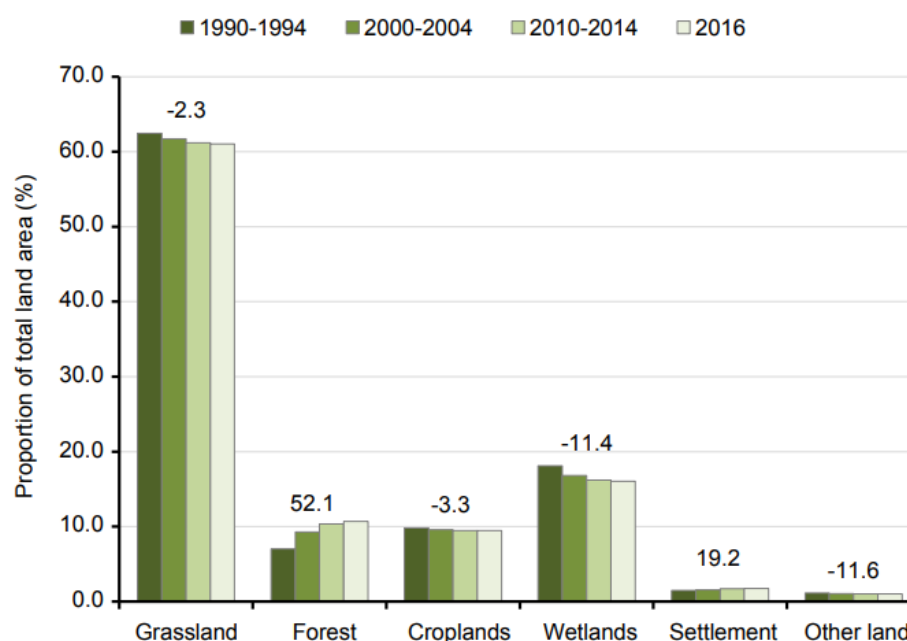
Land use, Land Use Change and Forestry (LULUCF) covers the following categories: Forest land, Cropland, Grassland, Wetlands, Settlements, Other land and Harvested Wood products. This sector is a net source of GHG emissions in Ireland, of which the main source is from Grasslands and Wetlands, with 7.57 MtCO₂eq. and 2.00 MtCO₂eq. being emitted in 2021 respectively; refer to **Table 5-4** (DECC, 2023,³⁹ EPA, 2022⁴⁰).

Table 5-4: LULUCF Categories and Emissions, 2021

LULUCF Category	Emissions / Removals Mt CO ₂ eq
A. Forest land	-0.43
B. Cropland	-0.01
C. Grassland	7.57
D. Wetlands	2.00
E. Settlements	0.21
F. Other land	0.04
G. Harvested wood products	-1.61
Total LULUCF	7.8

Source: Table 17.4, *Climate Action Plan 2023* (DECC, 2022). Available at: <https://www.gov.ie/en/publication/7bd8c-climate-action-plan-2023/>

Climate Change and Land Use in Ireland report (EPA, 2021)⁴¹ sets out to inform policy in relation to specific challenges to climate change mitigation and adaptation presented by Ireland's land system and land use. According to this report, land use within Ireland between 1990 and 2016 has been relatively stable, with a slight reduction in grassland and wetland cover and an increase in forest land cover (**Figure 5.7, Table 5-5**).



Source: Figure 2.1 from EPA (2021) *Research Report No. 371 – Climate Change and Land Use in Ireland*. Values shown above bars are the relative change in area from the period 1990–1994 to 2016. Data source: CSO (2018). Available at: https://www.epa.ie/publications/research/climate-change/Research_Report_371.pdf

Figure 5.7: Land Use Change between 1990 and 2016 across Six Categories

³⁹ DECC (2023). *Climate Action Plan 2023*. Available at: [gov.ie - Climate Action Plan 2023 \(www.gov.ie\)](https://www.gov.ie/en/publication/7bd8c-climate-action-plan-2023/)

⁴⁰ EPA (2022). LULUCF - <https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/lulucf/>

⁴¹ EPA (2021). *Climate Change and Land Use in Ireland*. Available at: https://www.epa.ie/publications/research/climate-change/Research_Report_371.pdf

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Table 5-5: Land Cover Change between Key CORINE (2018) Land Cover Classes, 1990-2018

CORINE Level 1 Class	1990	2000	2006	2012	2018
Artificial Surfaces (1)	1.45%	1.99%	2.42%	2.37%	2.4%
Agricultural Areas (2)	67.48%	66.93%	67.47%	67.45%	67.35%
Wetlands (4)	18.49%	16.82%	15.6%	14.88%	14.83%
Forests and Semi-Natural Areas (3)	10.22%	12.01%	12.41%	13.21%	13.33%
Water Bodies (5)	2.35%	2.26%	2.1%	2.1%	1.72%

Source: Table 2.1, EPA (2023) Land Use Evidence Review Phase 1 Synthesis Report. Available at: <https://www.gov.ie/en/publication/f272c-land-use-review-phase-1/>

CSO (2023)⁴² data has provided insight into similar trends from between the period 1990 and 2020. There has been a decrease in grassland land use in Ireland between 1990 (62%) and 2020 (59%). There has been an increase in forest cover between 1990 (7%) and 2020 (11%). There has been an increase in agricultural land farmed organically in Ireland by 404% between 1997 and 2021. In terms of urbanisation, there has been an increase of 194% of new dwelling completions in Ireland, from 6,994 units in 2011 to 20,560 units in 2021. Over half of these were part of housing schemes, 23% comprised single houses, and 25% comprised apartments.

Forestry

Forestry represents a high proportion of land use cover (9.5%) (EPA, 2023)³⁸ and has grown from 1.4% since the founding of the state (DECC, 2023)³⁹. However, Ireland is still significantly below the national target set out in Climate Action Plan 2023 of 18% (DECC, 2023) and has the third lowest forest land cover among EU member states (CSO, 2023)⁴². Commercial forestry is dominated by monoculture plantations of conifer species, however the area of native woodland planted has also increased in the last decade (EPA, 2021)⁴¹.

In Ireland, non-native conifer species mixes are considered to have good carbon sequestration potential. Teagasc in 2020 reported that Sitka spruce in Ireland accounts for 75% of the total carbon stored in Irish forests⁴³, and it comprises the most planted timber crop in Ireland. However, such species may not necessarily support ecological diversity. For instance, protected species such as the hen harrier require mosaic forests rather than monocultures, and shading from spruce conifers inhibits understory growth. In 2022, forest cover in Ireland was 11.6%, of which about 2% is native.

Therefore, while conifer species such as Sitka spruce are fast growing and grow well in Ireland's temperate conditions, as it is a species native to North America, it lacks ecological connections with native forest ecology. Marginal grasslands may also be targeted as areas for afforestation, but these areas often support high biodiversity value in terms of wild plants and as feeding/foraging/roosting areas for birds, so the competing interests of afforestation/carbon sink creation, versus other environmental aspects such as reduced biodiversity in favour of increasing forest cover, must be considered.

It is expected that the demand for wood will increase by 3.1% per annum and annual timber output is expected to increase from 4 million m³ to 8 million m³. Timber and forest products can contribute towards utilising more sustainable building materials by acting as a substitute for synthetic materials from non-renewable sources (Coillte, 2022). Building with wood uses almost eight fewer tonnes of CO₂ per housing unit than conventional masonry buildings.

Agriculture

Agriculture constitutes 67.33% of national land cover, with the main agricultural class being pasture (51.1%). According to the CORINE Land Cover Classes, agriculture has maintained roughly the same coverage between 1990 and 2018, at 67.48% and 67.35%, respectively (Government of Ireland, 2023)⁴⁴.

⁴² CSO (2023). Environmental Indicators Ireland 2022. [Land Use - CSO - Central Statistics Office](#)

⁴³ Teagasc (July 2020). Media Article: Forestry and climate change mitigation: The role of Sitka spruce and how its continued improvement will play a key role in climate change mitigation. Available at: <https://www.teagasc.ie/publications/2020/forestry-and-climate-change-mitigation-the-role-of-sitka-spruce-and-how-its-continued-improvement-will-play-a-key-role-in-climate-change-mitigation.php>

⁴⁴ Government of Ireland (2023). Land Use Evidence Review Phase 1 Synthesis Report. Available at: <https://www.gov.ie/en/publication/f272c-land-use-review-phase-1/>

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Within Ireland, agriculture contributes significantly to GHG emissions as a result of the dominance of ruminant livestock production and a relatively low level of heavy industry (EPA, 2021)⁴⁵. There have been increases in nitrous oxide (N₂O) and methane (CH₄) emissions over the past decade which have been driven by intensification of production systems for both organic and inorganic nitrogen fertilisers and increases in national herd numbers. In general, dairy farming is the most intensive in terms of inputs and stocking density, while beef and sheep farming is less intensive, and poultry and farmed fish/shellfish are lower still. In 2021, Ireland had the third highest number of cattle within the EU member states, with 8.8% of the total population (CSO, 2022)⁴⁵. In 2020, Ireland was the eighth largest exporter of boneless beef and veal in the world, and in 2021 Ireland exported 451,000 tonnes of beef worth over €2.4 billion (DAFM, 2022)⁴⁶.

In 2021, Ireland exported dairy products to over 130 countries, representing a value of €5.1 billion (top exports of which comprised cheese, butter, food preparations, infant formula, and skim milk powder) (DAFM, 2022)⁴⁶. The recent rapid growth in the dairy sector since 2011 has contributed to the increase in the national cattle herd, with an increase of 40.5% in dairy cows from the years 2011 and 2018 (EPA, 2021)⁴⁷.

Land use activities aimed at increased production efficiency and improved grazing land and livestock management have high emissions reduction potential. Agroforestry and agricultural diversification are also options, but these options face considerable barriers to uptake by landowners. Afforestation and bioenergy/energy crops have considerable mitigation potential; however, they could have negative impacts on biodiversity and increase land competition if implemented at large scales, as well as requiring some degree of land use change. The restoration of peatlands and organic agricultural soils represents a major opportunity to reduce GHG emissions and create carbon sinks, but positive outcomes require major investments.

Peatlands and Wetlands

Wetlands in Ireland support biodiversity and provide essential ecosystem services such as flood attenuation and improved water quality. The pressures of Irish wetlands result from activities such as drainage, infilling, turf cutting, nutrient enrichment, overgrazing, agricultural improvements, afforestation and invasive species. From 1990 to 2018, Ireland has lost 258,800 hectares of wetlands⁷. The wetland category, which is dominated by peatlands, accounts for a significant proportion of the land area in Ireland, at 16.1%. Peatlands have significant value in terms of carbon storage and other ecosystem services but have been largely degraded by human use (EPA, 2021)⁴⁷.

As presented in **Table 5-3**, there are 45 sites across the country designated under the Ramsar Convention on Wetlands 1971 and the Irish Ramsar Wetlands Committee that supports Ireland in meeting its requirements under the Convention.

The National Peatland Strategy has estimated that peatlands store 1,566 million tonnes of carbon and represents approximately 64% of the national total soil organic carbon stock (EPA, 2023)³⁸. However, anthropogenic activities such as afforestation on organic soils, drainage of organic soils for conversion to agriculture lands, plantation forests on peatlands/peaty soils, and commercial extraction of peat, are key pressures on peatlands, as well as contributing to GHG emissions (DECC, 2023)³⁹. Only a small portion of historic peatlands remain intact with only 10% of the original raised bogs and 28% of the original blanket peatlands deemed suitable for conservation as natural peatlands (EPA, 2023)³⁸.

5.3.3.4 Existing Environmental Pressures/ Problems: Land and Soils

In Ireland, the quality of soils in Ireland is considered generally good and the estimated proportion of contaminated land is relatively small; the EPA State of the Environment Report 2020 states that nationally, soil quality is not significantly impacted by contamination issues. In terms of soil protection, there is no European legislation which focuses on soil, leading to continuous degradation of the land and soils across

⁴⁵ CSO (2022). Environmental Indicators [Land Use - CSO - Central Statistics Office](#)

⁴⁶ DAFM (2022). Annual Review and Outlook for Agriculture, Food and the Marine 2022. Available at: <https://www.gov.ie/en/publication/91e7e-annual-review-and-outlook-for-agriculture-food-and-the-marine-2020/>

⁴⁷ EPA (2021). The Status of Ireland's Climate, 2020. [Research Report 386. \(epa.ie\)](#)

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Europe. However, the EU has proposed to introduce a Soil Monitoring Law and the general approach on the Directive was approved by the EU Council in June 2024.⁴⁸

A recent *Global Assessment Report on Biodiversity and Ecosystem Services* (IPBES, 2019)³² identified some alarming figures; approximately 75% of the land surface has been significantly altered across the globe, as well as more than 85% of wetland areas lost due to anthropogenic pressures, which in turn has impacted and caused a rapid decline in ecosystems and biodiversity globally. Nationally, key soil pressures impacting on the long-term protection and maintenance of soil and soil quality include soil sealing, compaction, erosion, decline of organic matter content, salination and landslides.

Land is a critical resource, but it is under increasing pressure from human activities and climate change. Climate change and extreme weather events are undermining food security and exacerbating desertification and land degradation. Through sustainable management, land and soils are crucial elements of ecosystem functioning and for food production. The EPA Report, Ireland's Environment 2020 - An Assessment, states that *"A progressive approach to land cover, land use and land management is required to promote land practices that are sustainable and right for our environment and our people. Implementing such an approach will help coordinate, prioritise and measure Ireland's response to significant environmental issues such as climate change and the decline in nature across multiple sectors. An integrated national approach to land mapping will be needed to support this work."*

In the context of climate action, Ireland faces a particular set of challenges in relation to GHG emissions associated with land systems (EPA, 2021)⁴¹. Currently, Ireland's Land Use, Land Use Change and Forestry (LULUCF) sector is a current carbon source, accounting for 11.2% of Ireland's GHG emissions (DECC, 2023)³⁹. This is due to the Ireland's low forest cover (11.3%) in comparison to the EU average of 38%, as well as its carbon emissions from Grassland and Wetlands (DECC, 2023). In addition, Ireland relies heavily on ruminant livestock-based agriculture, which is responsible for a considerable portion of Ireland GHG emissions⁴¹. Furthermore, the EPA has projected net LULUCF emissions to rise up to 2030, which will necessitate a changes in land use activities; this will involve further bog rehabilitation, increased afforestation, improved management of grasslands on mineral soils, increasing the use of cover crops in tillage, and the rewetting of organic soils.

In this context, the key issues associated with the implementation of the draft Plan for land and soil relate to:

- Future infrastructure land requirements and land use change.
- Competing interests of afforestation/carbon sink creation, versus other environmental aspects such as reduced biodiversity and increased planting of non-native species/monocrops in favour of increasing forest cover and gaining greater carbon sequestration.
- Influences on land use practices reliant on soil as a resource.
- The potential for impacts on soil functions/ sequestration potential as a result of land use changes (e.g. continued urban sprawl, infrastructural development etc.).
- Opportunities to preserve and protect natural carbon sinks e.g. peatlands, wetlands, forests.

5.3.4 Water

The baseline relevant to the draft first revision to the NPF in relation to Water is as follows:

- Water quality – compliance with Water Framework Directive (WFD) and Marine Strategy Framework Directive (MSFD) objectives, status, pollution (nutrient, sediment, pH etc.) from point or diffuse sources driven by existing anthropogenic pressures i.e. urban wastewater discharges, hydromorphological changes (channelisation, drainage etc.) etc.
- Water Services – alignment with water and wastewater capacities and Uisce Éireann capital investment plans.
- Flood risk – fluvial, coastal or groundwater flood risk, storms or storm surges etc. driven by climate changes.

⁴⁸ Council of the European Union, 2024. General approach on the soil monitoring law. Available at: <https://data.consilium.europa.eu/doc/document/ST-11299-2024-INIT/en/pdf>

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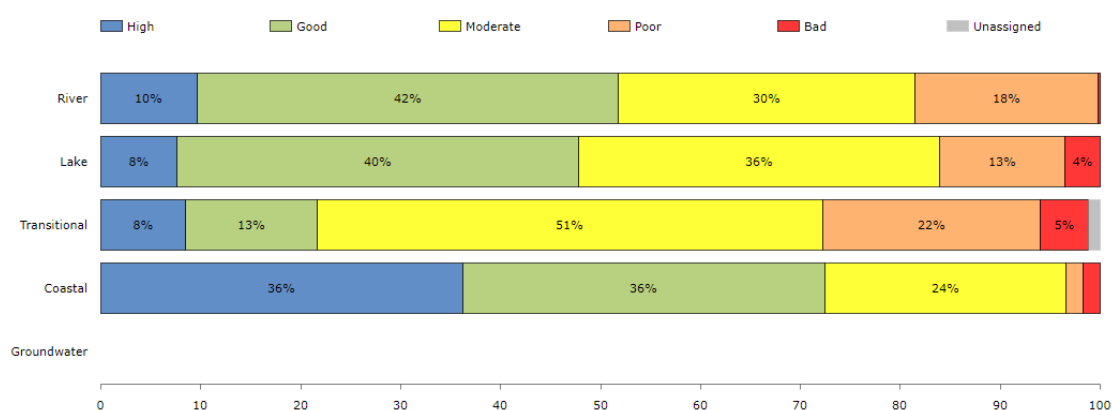
- Recreational and commercial activities in freshwater and marine waters (refer to **Section 5.3.7**).

5.3.4.1 Water Quality and Ecological Status

The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters (surface, estuarine and coastal and groundwaters) and protect, enhance and restore all waters with the aim of achieving at least good status by 2015, and by 2027 at the latest. An 'ecological status' assessment approach was implemented in Ireland as part of WFD implementation. The approach incorporates chemical and biological monitoring into a status grade for each water body, and for surface waters is classified according to a scale of High, Good, Moderate, Poor and Bad. Status on groundwaters is classified as either Good or Poor. In addition to ecological status, a number of water bodies are also monitored for their chemical status. This comprises monitoring for priority hazardous substances e.g. dioxins, polycyclic aromatic hydrocarbons, cadmium, certain pesticides/ insecticides etc. Ireland's Surface Water Regulations (S.I. No. 272/2009) as amended, also contains a list of Substances of Union Concern which currently have no environmental quality standards set, but which are being kept under consideration due to their increasing presence in the aquatic environment, including antibiotics, hormones and neonicotinoids.

Surface Waters

Figure 5.8 summarises the current status of surface water and groundwater bodies in Ireland for the 2016-2022 monitoring period.



Source: Water Quality Status 2016-2021 (Dashboards on <https://www.catchments.ie/>, Accessed May 2024)

Figure 5.8: Summary of WFD Ecological Status for Surface Waters (2016-2021)

A detailed report on water quality from EPA (2022) covering 2016-2021⁴⁹ period states that over half (54%) of Ireland's surface waters are in good or better ecological status and the remaining half (46%) are in unsatisfactory condition. There is a relatively small decline in water quality of rivers and lakes. The number of estuaries and coastal water bodies in satisfactory condition has decreased by almost 16% and 10% respectively. Overall, Ireland's water quality is declining and the number of monitored water bodies in satisfactory condition has decreased since the last assessment.

The EPA (2024) report, Water Quality in 2023: An Indicator's Report⁵⁰ outlines that 42% of river sites (mainly in the South east, Midland and Eastern regions) and 17% of estuarine and coastal water bodies have unsatisfactory nitrate concentrations; the majority are located in the east and southeast, with most of the nitrogen coming attributable to organic and inorganic fertiliser use from intensive agricultural activities on free-draining soils. The EPA also reports that average nitrate levels in rivers and groundwaters increased nationally between 2021, 2022 and again in 2023. In terms of phosphate, 27% of river sites and 35% of lakes have unsatisfactory concentrations affecting biological quality; the levels fluctuate between years but phosphate trends have remained generally stable and there has been no significant change in recent years.

⁴⁹ EPA (2022). Water Quality in Ireland 2016-2021. Available at: <https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/water-quality-in-ireland-2016--2021-.php>

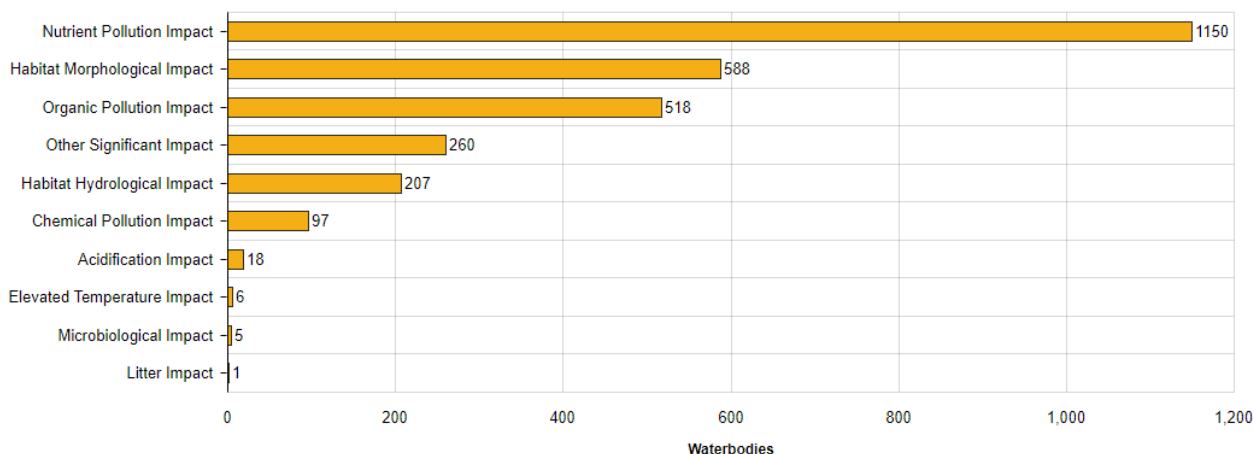
⁵⁰ EPA (June 2024) Water Quality in 2023: An Indicator's Report. Available at: <https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/water-quality-in-2023.php>

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The main source of nitrogen in our waterways is agriculture and the main source of phosphorus is agriculture and waste water.

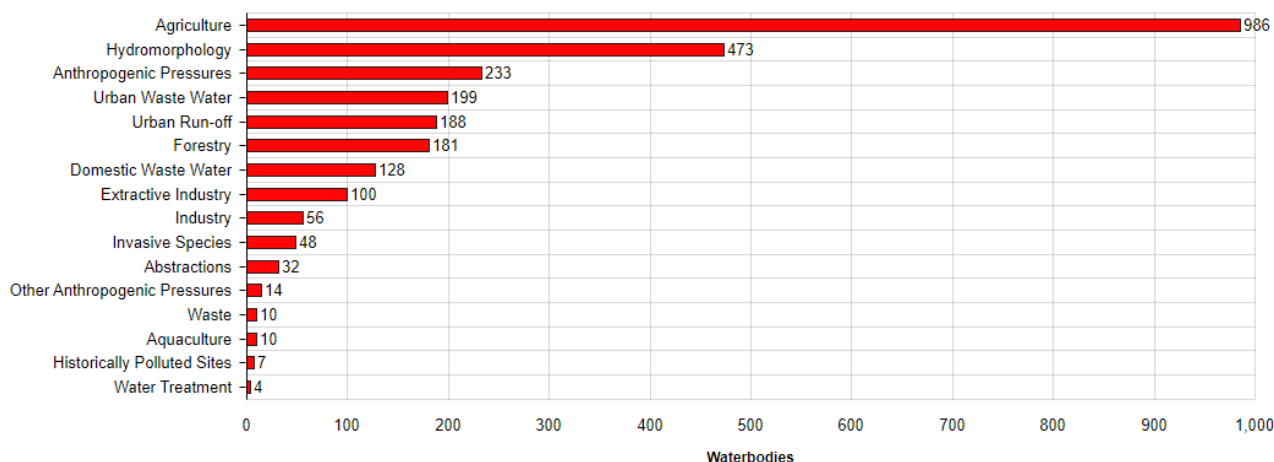
The EPA states that nitrogen and phosphorous loadings to the marine environment have been generally increasing since 2013, but trends have remained broadly unchanged in recent years.⁴⁹

For those surface water bodies at risk of not achieving their WFD objectives, the significant pressures are outlined in Figure 5.9 and the key sources are shown in Figure 5.10.



Source: Water Quality Status 2016-2021 (Dashboards on <https://www.catchments.ie/>, Accessed June 2024)

Figure 5.9: Impacts of Significant Pressures on At Risk Surface Water Bodies



Source: Water Quality Status 2016-2021 (Dashboards on <https://www.catchments.ie/>, Accessed June 2024)

Figure 5.10: Sources of Significant Pressures on At Risk Surface Water Bodies

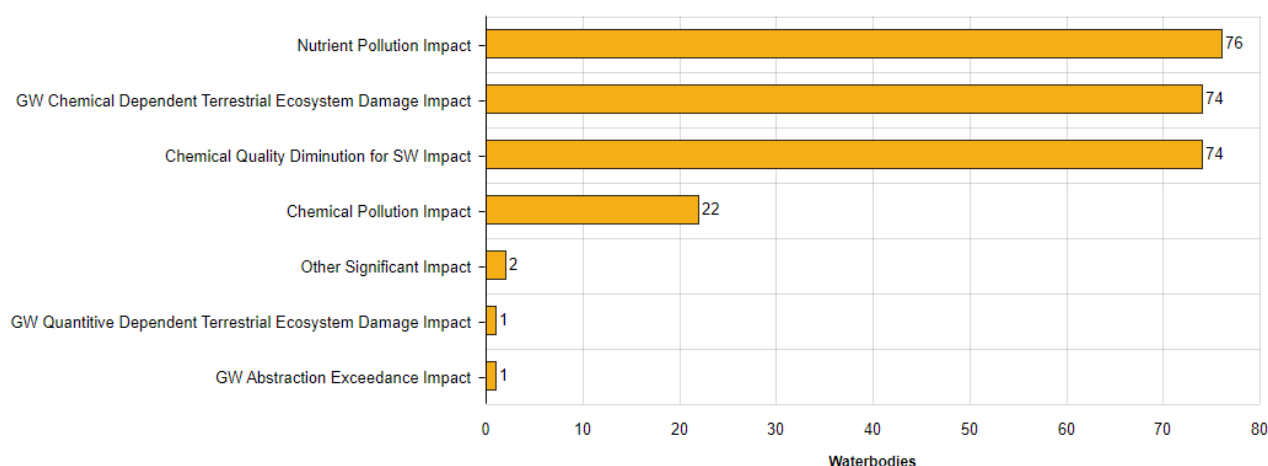
Groundwater Status

The majority of groundwater bodies (470 or 91%) were reported as having Good status for 2016-2021⁴⁹. The remaining groundwaters (42 or 8%) have Poor chemical status, mainly due to historic contamination from industrial and waste sources. The main substances causing failure include nitrate, ammonia, chlorinated solvents, metals and hydrocarbons. Use of herbicides also remains widespread in Ireland, which can be present in groundwaters. The EPA reports that nearly all groundwaters have Good quantitative status, i.e. rainfall replenishment can support current abstraction volumes.⁵¹

For those groundwater bodies that are at risk of not achieving their WFD objectives, the significant pressures are outlined in Figure 5.11 and the key sources are shown in Figure 5.12.

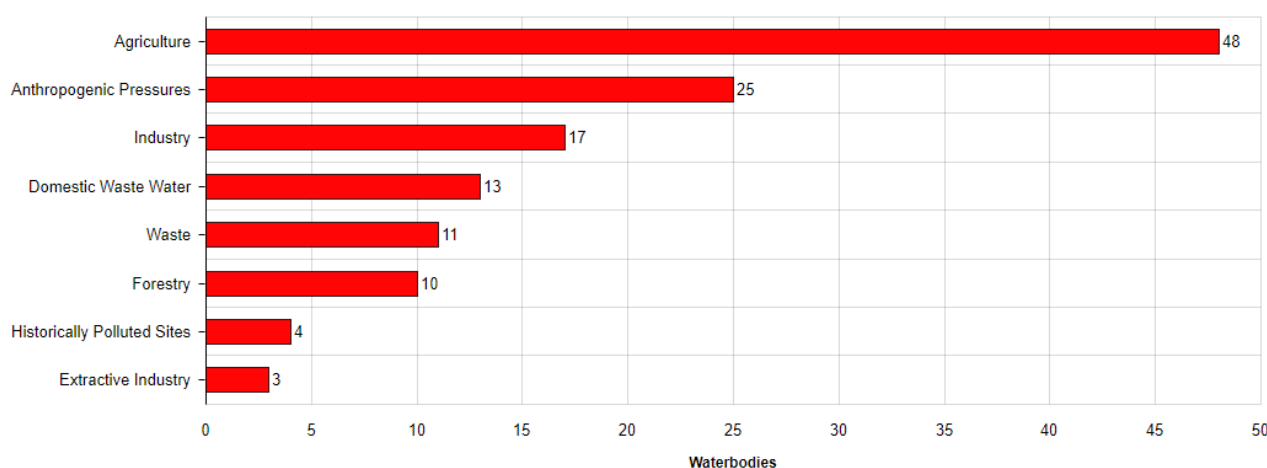
⁵¹ EPA – Groundwater. Available at: <https://www.epa.ie/our-services/monitoring--assessment/freshwater--marine/groundwater/>

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Source: EPA Pressures (Dashboards on <https://www.catchments.ie/>, Accessed June 2024)

Figure 5.11: Impacts of Significant Pressures on At Risk Groundwater Bodies



Source: EPA Pressures (Dashboards on <https://www.catchments.ie/>, Accessed June 2024)

Figure 5.12: Sources of Significant Pressures on At Risk Groundwater Bodies

5.3.4.2 Water Framework Directive Protected Areas

Article 6 of the Water Framework Directive requires each Member State to establish a Register of Protected Areas for water bodies or parts of water bodies that must have extra controls on their quality by virtue of how their waters are used by people and wildlife. This register was split into five categories, with a breakdown of WFD protected areas nationally outlined in **Table 5-6**.

Drinking Waters

Waters used for the abstraction of drinking water - this category of protected area replaced the system of drinking water protection previously provided by the Surface Water Abstraction Directives (75/440/EEC) and also incorporates groundwaters.

Economically Significant Aquatic Species

Areas designated to protect economically significant aquatic species - These are protected areas established under earlier EC directives aimed at protecting shellfish (79/923/EEC) and freshwater fish (78/659/EEC).

Recreational and Bathing Waters

Bathing waters designated under the Bathing Water Directive (76/160/EEC).

Nutrient Sensitive Areas (NSA)

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These comprise nitrate vulnerable zones designated under the Nitrates Directive (91/676/EEC) and areas designated as sensitive under the UWWT Directive (91/271/EEC) for agglomeration with a PE > 10,000. Due to widespread agricultural activities nationally, Ireland opted to class the state as a whole as a nitrate vulnerable zone.

NSAs designated under the UWWT Directive are identified as “*natural freshwater lakes, other freshwater bodies, estuaries and coastal waters which are found to be eutrophic or which in the near future may become eutrophic if protective action is not taken*”. The draft 3rd Cycle River Basin Management Plan states that the EPA has carried out a review of NSAs which are downstream of large urban wastewater discharges, comprising 76 discharges⁵². The assessment indicated 66 areas downstream of 51 of these discharges were identified as being nutrient sensitive. This represents an increase from the previous assessment undertaken in 2016, which identified 64 NSAs downstream of 48 discharges. When an NSA is identified, additional nutrient removal is required for the wastewater treatment plant discharges.

Protection of Habitats and Species

Areas designated for the protection of habitats or species, where the maintenance or improvement of the status of water is an important factor in their protection. These are designated under the Birds Directive (2009/147/EC) and the Habitats Directive (92/43/EEC). Many European sites have water-dependent habitats and species, therefore water quality and overall ecological status of water bodies are important environmental factors contributing to biodiversity and ecological resiliency.

Table 5-6: Breakdown of Water Framework Directive Protected Areas

WFD Protected Areas		Count
Drinking Waters (rivers and lakes)		341
Economically Significant Aquatic Species (shellfish)		64
Salmonid Rivers		34
Recreational and Bathing Waters		145
Nutrient Sensitive Areas (rivers and lakes)		59
Water Dependent Habitats & Species designated under the Birds and Habitats Directives	Habitats	385 of 439 SAC*
	Birds	149 of 165 SPA*

Source: EPA Register of Protected Areas database. **Note:** Salmonid Rivers (designated under S.I. 293 of 1988) are included in the EPA's Register of Protected Areas as the Habitat Regulations cover only Atlantic salmon whereas the Salmonid Regulations cover all salmonid species.

* Count of features from the WFD_RPAPROTECTEDWATERBODIES table gives protected area type as 'Habitats' / 'Birds' and represents the count of water-dependent conservation objectives intersecting water bodies (surface and groundwater) therefore counts in that dataset are higher.

5.3.4.3 Marine Waters MSDF Status

The Marine Strategy Framework Directive [MSFD] (2008/56/EC) has adopted an ecosystem-based approach to protect and manage the marine environment. This forms an integral component of maritime spatial planning within the EU and requires Member States to develop a strategy to achieve or maintain Good Environmental Status (GES) in their marine waters by 2020 through a Programme of Measures. Marine waters must be assessed against an agreed set of standards across a number of important environmental areas (e.g. biodiversity, fish stocks, and contaminants) with reference to 11 descriptors and associated indicators for GES.

Ireland has one of the largest marine and MSFD assessment areas in Europe, at approx. 488,762 km². There is also an overlap between the waters under the WFD and the MSFD for one nautical mile from the high water mark. Under the MSFD, 11 qualitative descriptors are required for establishing Good Environmental Status (GES):

- Five are compatible with GES (D2 Non-indigenous species; D5 Eutrophication; D7 Hydrographical conditions; D8 Contaminants; and D9 Contaminants in seafood);

⁵² [Draft River Basin Management Plan for Ireland 2022-2027](#)

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- Two are compatible for the elements assessed (D10 marine litter and D11 Energy, including underwater noise);
- Three have some elements compatible with GES (D1 Biodiversity; D3 Commercial fish and shellfish; and D6 Sea-floor integrity); and
- One is unknown (D4 Food webs).

The EPA report, Ireland's Environment – An Assessment (EPA, 2020) reports that for the latest MSFD assessment found that Ireland's coastal and marine waters are generally clean and healthy, but pressures persist, including marine fisheries and aquaculture⁷. Under the WFD, 80% of coastal and 38% of transitional water bodies have achieved or maintained at least Good ecological status. Nutrient loading (namely of phosphorus and nitrogen) from freshwater sources to the marine environment have increased since 2012. However, assessment of Ireland's marine waters shows the absence of eutrophication and have reached GES for this indicator.

Under MSFD Descriptors 8 and 9, Ireland's initial assessment indicates contaminant concentrations in shellfish and commercial fish are elevated above background levels but not enough for significant adverse effects. For biodiversity, some marine fish and bird species are either threatened/vulnerable, or in poor condition; six of 58 cartilaginous fish are critically endangered. For non-commercial fish, 11 species are achieving GES, 18 are not and 23 species have unknown status⁷.

Of seabird populations, 17 of 20 monitored species have increased populations, two are stable and one has decreased. Numbers of some winter/migratory species on coastal and estuary sites are showing continued and increasing population declines. There is a current lack of long-term monitoring data for a number of cetacean species, but recent data indicates higher population numbers for some species than previously thought. Bycatch remains a pressure but for several species this does not appear to be impacting significantly on their populations. Grey and harbour seals are considered to have achieved GES⁷.

Commercial fisheries also place pressure on the marine environment through overfishing/discards of target species and bycatch of non-target species, and fishing/aquaculture can cause disruption/destruction of habitats and species from trawling and dredging (e.g. oyster dredging). Irish fish stocks have declined due to overfishing and disturbance. Key aspects such as the locations/use of some nursery habitat/feeding areas remains poorly understood; 34 stocks (18%) achieved GES, 44 (22%) did not, with the status of 99 stocks unknown. Disturbance and impacts to seafloor habitats (e.g. from bottom trawl fishing gear) are widespread in Ireland's continental shelf area (46% of the assessed area is highly disturbed), but not all of the maritime area has been assessed. Many benthic habitats, including reefs, are thought to be severely damaged as a result of bottom-trawl fishing gears⁷.

5.3.4.4 Flood Risk

Floods are a natural and inevitable part of life that can pose a risk to human life and well-being, property and the environment, and this includes coastal areas, and related impacts from climate change, sea level rise and erosion. Flood risk can be minimised or avoided on land to a degree through careful selection of areas for development, as well as how developments are designed to manage water.

The Office of Public Works (OPW) is responsible for the implementation of the Floods Directive (2007/60/EC) which is being carried out through the Catchment-based Flood Risk Assessment and Management Studies (CFRAMS). The OPW undertook Preliminary Flood Risk Assessments to identify areas of existing or potentially significant future flood risk and to prepare flood hazard and risk maps for these areas. Following this, 29 Flood Risk Management Plans (FRMPs) were developed for these areas setting objectives for managing the flood risk and setting out a prioritised set of measures to achieve the objectives. The protection measures from each of the plans form a national priority list which will inform the development of a programme of implementation for capital works. The work to date as part of CFRAMS has had a direct strategic influence on land use planning and siting of developments, ensuring that future infrastructure growth is positioned in the appropriate locations, taking flood risk into account. The FRMPs that were developed were published in early 2018 and flood extent mapping is available on the OPW's dedicated flood map viewer.⁵³ In addition, in 2009 *The Planning System and Flood Risk Management Guidelines for Planning Authorities* were published (DHLGH, 2009)⁵, which ensures that flood risk assessment and management is incorporated within the planning system.

⁵³ OPW Flood Maps Viewer: <http://www.floodinfo.ie/map/floodmaps/>

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In relation to climate action, there must be alignment between the Floods Directive and associated flood risk plans and the WFD and the associated draft Plan. There are opportunities for synergies in measures which can naturally alleviate or protect against flooding without negatively impacting on achievement of WFD objectives but hard infrastructure and poor planning decisions can negatively impact.

5.3.4.5 Existing Environmental Pressures/ Problems: Water

Overall, around 46% of Ireland's surface water bodies (river, lake, transitional and coastal) are failing to meet their objectives under the WFD. For the water quality reporting period 2016-2021, just over half of Ireland's water bodies (54%) were at Good or High ecological status. The remaining water bodies were at Moderate, Poor or Bad status. The majority of groundwaters (91%) have Good status, and nearly all groundwaters have Good quantitative status. Water quality issues in estuaries is driven mainly by excess nutrients/eutrophication.

In summary, almost all of the negative trends are driven by changes in river water quality, with the trends also indicating that water quality is getting worse. The key pressures on surface water bodies continues to be agriculture, followed by hydromorphological issues, wastewater discharges, forestry, as well as other pressures. In the marine space, the key drivers of pressures and impacts arise from anthropogenic sources such as litter, climate change, noise and pollution events.

The general trend for water quality in Ireland is of decline. The top sources of significant pressures affecting water bodies at risk of achieving their WFD objectives are agriculture, followed by hydromorphological issues (e.g. barriers, drainage, channelisation etc.), anthropogenic pressures (unspecified/ unknown sources), urban wastewater, urban run-off and forestry, among others. This is relevant for the draft first revision to the NPF as it supports a wide range of sectoral activities, including supporting the agricultural and food sector, forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities. Water bodies impacted by various pressures means there is less resiliency for the water environment in general to absorb additional pressures. Such pressures can arise for example from changing environmental conditions as a result of climate change, as well as from the demands placed on the water resource to serve a growing population e.g. the need for new water sources to supply sufficient headroom for the existing population, as well as catering for growing water demands.

The key issues and challenges impacting the water environment of relevance to the draft first revision to the NPF relate to:

- Water pollution (nutrient, sediment, pH etc.) from point or diffuse sources from implementation of abatement measures e.g. increasing levels of afforestation, land use changes etc, as well as water pollution driven by existing anthropogenic pressures i.e. agriculture, urban wastewater discharges, hydromorphological changes (channelisation, drainage etc.) forestry etc.
- Impacts to marine waters and the foreshore from both onshore and offshore development and existing pressures e.g. inputs of nitrogen from the terrestrial environment.
- Impacts on groundwater quality and quantity.
- Pressures and impacts on ecological status of water bodies.
- Impacts on water supply (including potable) and water conservation.
- Potential impacts on recreational and commercial sea fishing activities.
- Protection of areas of fluvial, coastal or groundwater flood risk.
- Changes in environmental conditions which are being driven by climate changes, such as ocean warming and acidification, increased winter precipitation, increased summer droughts/low water levels, increased risk/incidence of flooding, increase in storms or storm surges etc.
- Potential for transboundary impacts as water bodies, such as rivers and lakes, designated shellfish areas, and some groundwater-dependent terrestrial ecosystems (such as bogs), are cross-border. Development activities supported by the draft first revision to the NPF's policy base has the potential to have effects on shared waters.

5.3.5 Air Quality

The baseline relevant to the draft first revision to the NPF in relation to Air Quality is as follows:

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- Ambient air quality – emissions associated with transport, industry, heating etc. EU and WHO Air Quality emission limits.
- Transboundary air quality.

According to the World Health Organization (WHO, 2023)⁵⁴, air pollution is the presence of one or more contaminants in the atmosphere, such as dust, fumes, gas, mist, odour, smoke, or vapour, in quantities and durations that may be injurious to human health.

Air quality impacts can be on a local scale or a regional/national scale. Local air quality impacts such as dust can have health and nuisance impacts in the vicinity of, for instance construction activities. On a regional scale, vehicle and ship/boat emissions can generate transboundary gases i.e., greenhouse gases (GHGs) such as carbon dioxide (CO₂) and pollutants such as sulphur dioxide (SO₂). Given the geographic scope of the draft first revision to the NPF, this baseline assessment addresses the national scale emissions as local impacts will be addressed through the planning and EIA processes.

5.3.5.1 Ambient Air Quality in Ireland

At a national scale, Ireland has good air quality which is consistently rated among the best in Europe; this is due largely to the prevailing clean westerly air-flow from the Atlantic and the relative absence of large cities and heavy industries. The Air Quality Index for Health (AQIH) ranges from 1 (Good) to 10 (Very Poor). All monitoring stations currently reflect an AQIH between 1-3 which is in the range of Good (EPA, 2023)⁵⁵.

Terrestrial Air Quality

The EPA's National Ambient Air Quality Monitoring Programme (AAMP) was established in 2017 and expands on the national monitoring network. For ambient air quality, the EPA report *Air Quality in Ireland 2022* (EPA, 2023)⁵⁵ states that in 2022, measured particulate matter (PM₁₀ and PM_{2.5}), sulphur dioxide (SO₂), ozone, dioxins, polycyclic aromatic hydrocarbons (PAH), and all other monitored pollutant concentrations were all below their individual limit and target values as set out in the EU CAFE Directive (2008/50/EC) and Fourth Daughter Directive (2004/107/EC); refer to **Table 5-7**.

Ireland was however above the stricter WHO guidelines values for: SO₂ at 1 station; PM₁₀ at 26 stations (24 hr WHO guideline daily value) and at 15 stations (for the WHO guideline annual average value); PM_{2.5} at 75 stations (24 hr WHO guideline daily value); NO₂ at 28 stations (24 hr WHO guideline daily value) and at 23 stations (for the WHO guideline annual average value); and ozone at 19 stations (8 hr daily WHO guideline value) and 1 station (above peak season WHO guideline value); refer to **Table 5-8**.

Table 5-7: Selected pollutants measured in 2022 and their adherence to EU legal limit values (CAFE Directive) (Source: EPA, 2023)

Pollutant	Number of stations, parameter monitored 2022	EU legal limit values
PM ₁₀	85	No exceedances
PM _{2.5}	79	No exceedances
NO ₂	31	No exceedances
Ozone (O ₃)	22	No exceedances
Sulphur dioxide (SO ₂)	15	No exceedances
Heavy metals	5	No exceedances
All other pollutants	-	No exceedances

⁵⁴ WHO (2023). Air Quality and Health [Air quality and health \(who.int\)](https://www.who.int/air-quality)

⁵⁵ EPA (2023). EPA Air Quality <https://airquality.ie/>

Table 5-8: Selected pollutants measured in 2022 failing the WHO AGQ levels (Source: EPA, 2023)

Pollutant	Number of stations, parameter monitored 2022	WHO Air Quality Guideline (AQG) level or EEA reference level
PM ₁₀	85	Above annual WHO AQG value at 15 stations. Above daily WHO AQG value at 26 stations
PM _{2.5}	79	Above annual WHO AQG value at 76 stations. Above daily WHO AQG value at 75 stations
NO ₂	31	Above annual WHO AQG value at 23 stations. Above daily WHO AQG value at 28 stations.
Ozone (O ₃)	22	Above Peak Season WHO AQG level at 1 station. Above 8hr daily WHO AQG value at 19 stations
Sulphur dioxide (SO ₂)	15	Above WHO 24 hour AQG level at 1 station

Short-lived Climate Forcers

Short-lived climate forcers (SLCFs) are compounds (aerosols and gases) such as methane, that warm or cool the Earth's climate over shorter time scales (days to years) compared to long-lived GHGs like CO₂. Methane contributes to the formation of ground-level ozone (smog), an air pollutant and a GHG itself. The potential importance of reducing emissions of SLCFs such as methane is recognised not only to mitigate climate change but also to improve air quality and issues such as smog, and therefore bring near-term co-benefits in terms of human health, agricultural yields, and ecosystems (United Nations Environmental Programme (UNEP), 2011)⁵⁶. The Global Methane Assessment, launched by the UNEP and Climate and Clean Air Coalition (2021) integrates the climate and air pollution costs and benefits from methane mitigation. The assessment reports that a 45% reduction in global methane emissions would prevent an estimated 260,000 premature deaths, 775,000 asthma-related hospital visits, 73 billion hours of lost labour from extreme heat, and 25 million tonnes of crop losses annually⁵⁷.

Maritime Air Quality

Air pollution from ships is currently regulated by the MARPOL Convention, specifically Annex VI which limits the main air pollutants from ships, namely SO_x, NO_x, PM and the prohibition of deliberate release of ozone-depleting substances. Incineration on ships and emissions of VOCs are also regulated. The objectives are for progressive reductions in air pollution from shipping. The Annex VI standards were first developed through the International Maritime Organization (IMO) in 1997 and were subject to revisions in October 2008. Since then, these amendments have resulted in significant global reductions of NO_x, SO_x and PM emissions. The regulations also allow for emission control areas (ECA) to be established for which more stringent standards may apply. There is an EAC applied to the North Sea and English Channel for NO_x and SO_x, however there is currently none in place for the North-east Atlantic, Celtic Sea or Irish Sea.

Sulphur however is a globally significant air pollutant emitted from ships, with a 2016 Finnish study reporting that if SO_x emissions from ships did not reduce from 2020 onwards, pollution from ships would contribute to more than 570,000 additional premature deaths globally up to 2025.⁵⁸ Therefore under the revised MARPOL Annex VI standards, the global sulphur limit in ship fuels has been reduced from the previous limit of 3.5% to 0.50%, in effect since January 2020. This will continue to improve air quality over the coming years, particularly for populations in close proximity to ports.

5.3.5.2 Other Transboundary Issues

The Gothenburg Protocol to abate acidification, eutrophication and ground-level ozone was adopted in 1999. It sets out national ceiling limits up to 2020 for four key transboundary pollutants. The EU adopted its

⁵⁶ United Nations Environmental Programme (UNEP) Annual Report (2011). Available at: [UNEP 2011 annual report | UNEP - UN Environment Programme](#)

⁵⁷ UNEP (May, 2021). Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions [Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions | UNEP - UN Environment Programme](#)

⁵⁸ Marine Environment Protection Committee (August 2016). Air Pollution and Energy Efficiency: Study on effects of the entry into force of the global 0.5% fuel oil sulphur content limit on human health.

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provisions as part of the National Emissions Ceiling (NEC) Directive (2001/81/EC). The revised NEC Directive (2016/2284/EU) requires Ireland to limit the annual national emissions of the following transboundary pollutants: SO₂, nitrogen oxides (NO_x), non-methanogenic volatile organic compounds (NMVOC), ammonia (NH₃) and fine particulate matter (PM_{2.5}). Ireland's emission ceilings under the first NEC Directive applied until December 2019 with reference to 2005 as the base year. Article 4(1) and Annex II of the revised directive then sets out new reduction commitments for the aforementioned which apply from 2020 to 2029, and from 2030 onwards; see **Table 5-9**.

The EPA report *Ireland's Air Pollutant Emissions 2022 (1990-2030)* (EPA, 2024) outlines the current levels. Note that Ireland is utilising reporting flexibilities under the revised NECD for NO_x and NMVOCs. Unadjusted, emissions of these pollutants have exceeded the 2020 limit every year since 2010. The adjustments mean Ireland has been meeting the 2020 target since 2011, however further action is needed to ensure Ireland can meet the more stringent 2030 commitments.⁵⁹

Table 5-9: Ireland's National Emissions Ceiling Directive 2020 and 2030 Targets

Pollutant	Current 2010-2020 Targets (kilotonnes)	Emissions Trends (kilotonnes)								New Reduction Commitments (kilotonnes)	
		2015	2016	2017	2018	2019	2020	2021	2022	2020	2030
SO ₂	42	15.891	14.444	14.987	4.622	10.874	10.732	11.768	9.453	25.48	10.92
NO _x	65	61.341	62.090	58.381	56.074	57.689	95.413*	62.017	59.024	69.04	41.97
NMVOC	55	49.660	48.284	47.991	50.308	45.960	111.602*	46.421	66.75	50.56	45.84
NH ₃	116	119.525	124.819	126.635	135.214	125.404	123.748	124.654	128.636	118.37	113.59
PM _{2.5}	N/A	13.818	13.094	12.989	13.561	11.790	12.616	12.599	10.704	15.53	11.18

Note: Article 5(1) under Directive (EU) 2016/2284 has a flexibility mechanism that allows member states to adjust for compliance purposes. Due to applying improved inventory reporting methods, Ireland's reporting for NO_x and NMVOCs utilises these flexibilities and the emissions tabled above for those pollutants reflects these adjustments.

* Note – adjusted figures under the above flexibility mechanism have not been published; unadjusted figures are quoted from the Appendix to Ireland's Air Pollutant Emissions 1990-2030 (EPA, May 2023).

SO₂ emissions from Ireland have seen a generally consistent downward trend since 1990 and has been compliant with the NECD for all years since 2010. The main sources are combustion-related, mainly from the power stations and in the residential/commercial sectors (19.6% and 58.7% respectively in 2022) followed by the industrial sector (17.1%) (EPA, 2024). Emissions are projected to reduce even further to 2030.⁵⁹

Emissions of NO_x contribute to acidification of soils and surface waters, tropospheric ozone formation and nitrogen saturation in terrestrial ecosystems. In 2022, agriculture was the primary source mainly from the application of synthetic fertilisers and emissions from dung/urine deposited by grazing animals (36.4% of the total for 2022). Road transport was the second biggest source (34.8% in 2022). The other main sources are from the industrial, power generation and residential/commercial sectors, with contributions of 8.8%, 8.1% and 7.4% respectively in 2022. The remainder of NO_x emissions emanate from combustion in the agriculture sector and others (refining and storage, solid fuel manufacture, fugitive emissions and waste); together these sectors produced approximately 4.5% of the total in 2022. Total NO_x emissions in 2022, and projections for all subsequent years to 2030, are compliant with emission reduction commitments.⁵⁹

NH₃ emissions are associated with acid deposition and can contribute to the formation of particulate matter. Emissions have remained relatively steady with small fluctuations year on year. Ireland has exceeded the emission ceiling yearly since 2015, since the removal of milk quotas. Almost all emissions are associated with agriculture (99.4%); increases are mainly attributed to animal manures on grasslands and use of synthetic fertilisers. Road transport accounts for a small proportion (< 1%) of emissions. Reducing NH₃ emissions will be challenging for Ireland, given its main emissions source from agriculture and the ambitious targets as well as increased exports set out in the Agri-Food Strategy to 2030. The EPA states achievement of the 2030 commitment is projected under the WAM scenario, but this requires significant policy levers, and other measures, to provide further compliance.⁵⁹

⁵⁹ EPA (2024) Ireland's Air Pollutant Emissions 2022 (1990-2030). Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-air-pollutant-emissions-2022-1990-2030.php>

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Non-methane volatile organic compounds (NMVOCs) are emitted as gases by a wide array of products including paints, paint strippers, glues, cleaning agents and adhesives. NMVOCs also arise as a product of incomplete combustion of fuels and, as such, are a component of vehicle exhaust emissions. They also arise from the storage of animal manures and fertilisers in agriculture, and from the food and drink industry. NMVOCs contribute to the formation of ground level (tropospheric) ozone, with some species such as benzene and 1,3 butadiene being directly hazardous to human health (EEA, 2015)⁶⁰. In 2022 the main sources of these emissions in Ireland were from manure management in agriculture (39.1%), the food/beverages industry (28.2%) and solvent use and fugitive emissions (18.7%). Emissions from stationary combustion of fossil fuels across all sectors (power stations, industrial, residential, commercial, and agriculture) account for 10.5% of national emissions. Transport emissions account for 2.6% of national emissions, mainly from exhaust/fugitive releases from vehicles. Emissions from the food and beverage industry (mainly spirit production) have increased by 221.8% over the same period. This represents a challenge for Ireland to achieve reductions, with projections indicating Ireland will be non-compliant with the 2030 ceiling, as Ireland is projected to achieve a of 2.5% below 2005 levels, compared to Ireland's commitment of a 32% reduction on 2005 levels. Ireland is non-compliant with NECD commitments for NMVOCs for 2022 as a result of applying improved emission inventory methods which consists of using more up-to-date emission factors and recognising new sources of emissions.⁵⁹

PM is ubiquitous and there are many sources of dust including vehicle exhausts, surfaces such as soils and roads, industry emissions, construction activities as well as formation from reactions between different pollutant gases. PM₁₀ (dust particles with a diameter less than 10 micrograms [µg]) is small enough to be inhaled into the lungs however fine PM (PM_{2.5}, diameter less than 2.5 µg) is considered a better measure of anthropogenic sources of PM. The main source in Ireland is fossil fuel combustion in the commercial and residential and manufacturing industries and construction sectors (49.1% and 12.2% in 2022 respectively), with transport contributing 12.5%. Emissions from the *Other* sector account for 13.2% of 2022 emissions and comprise emissions from manufacture of solid fuels and oil refining/storage, construction and demolition, minerals, paving sectors etc. Emissions from agriculture accounted for 7.9% of emissions. Emissions from public electricity and heat production accounted for 4.1% of the total in 2022. Ireland is currently meeting its PM_{2.5} ceiling target, and projections under the WAM scenario indicate Ireland will be under its 2030 ceiling limit, however localised air quality issues across Ireland remain, as PM levels recorded at ambient monitoring stations continue to be a concern in villages, towns and cities.⁵⁹

5.3.5.3 Existing Environmental Pressures/ Problems: Air Quality

In general, Ireland has good air quality and generally meets its EU emissions limit values. However, pollutant monitoring indicates that exceedances are occurring of the stricter WHO guideline values i.e. PM_{2.5} and PM₁₀, SO_x and ozone, as well as exceedances of the EEA limit value for PAHs, indicating that air quality problems may be more widespread in Ireland than previously thought. Air quality is also a transboundary issue; air pollution events continue to impact Ireland annually from sources such as ozone and particulate matter from continental Europe, and vice versa. The major sources of air pollution is PM_{2.5} from solid fuel burning and NO_x from vehicle emissions, particularly in built-up areas. In terms of the coastal and marine environment, the main source of air pollution is from shipping, namely of SO_x, NO_x and particulate matter, as well as VOCs.

The EPA reports that Ireland remains compliant with emission reduction targets for SO₂, NO_x, NMVOCs and PM_{2.5}. For 2030, NMVOCs are projected to be non-compliant with the emission ceiling and will require additional national measures to meet the target. The EPA reports that full implementation of Climate Action Plan (CAP) policies and measures in the agriculture sector are envisaged would bring NH₃ into compliance for 2030. The NO_x ceiling is also forecast to be met but will require full implementation of CAP measures including electric vehicle targets, otherwise the emission ceiling will not be met. In Ireland it estimated that there are approximately 1,300 premature deaths per year attributed to air pollution. The main sources of this pollution is PM_{2.5} from solid fuel burning and NO_x from vehicle emissions, particularly in built-up areas.

The key issues and challenges impacting air quality of relevance to the draft first revision to the NPF relate to:

⁶⁰ EEA (2015). Indicator Assessment: Non-methane volatile organic compounds (NMVOC) emissions. <https://www.eea.europa.eu/data-and-maps/indicators/eea-32-non-methane-volatile-1/assessment-4> [Note: The EEA has discontinued reporting on this indicator]

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- Air quality trade-offs and co-benefits e.g. from modal shifts within built-up areas, decrease in private vehicle kilometres travelled etc., electrification/shift away from solid fuel burning etc. will together improve both indoor and outdoor air quality.
- Cross-sectorial impacts, e.g. implementation of plans and programmes across varied sectors, leads to improvements (or improvements) in air quality. For instance, continued reliance on fossil fuels for energy generation and for heating for example can also result in significant emissions of air pollutants, including carbon monoxide, nitrogen oxides, volatile organic compounds, and particulate matter, that locally or regionally affect the climate, human health, and ecosystems. However other sectoral activities, such as modal shift to sustainable or active travel modes, as well as shifting to electricity for transport, energy and heating, can yield air quality improvements and therefore co-benefits for not just air quality but climatic factors, human health and biodiversity (e.g. from reduced nitrogen deposition on sensitive habitats).
- A challenge for Ireland is to meet the more stringent WHO Air Quality Guidelines values compared to the current EU emission limits.

5.3.6 Climatic Factors

The baseline relevant to the draft first revision to the NPF in relation to Climatic Factor is as follows:

- Sectoral emissions and abatement - progress in terms of meeting budgets.
- Climate actions – mitigation and adaptation

5.3.6.1 International context

Human activities, particularly through the emissions of greenhouse gases (GHG), have been in large part responsible for global warming, with global surface temperatures reaching 1.1°C above 1850–1900 levels in 2011–2020 (IPCC, 2023)⁶¹. Future sea-level rise projections over the coming centuries have large uncertainties, concern relates to retrograde ice sheets where much of the ice sheet is grounded below present-day sea level which could reach tipping points where they become liable to collapse. Climate change is a multigenerational issue. Many aspects of the climate system, such as temperature and precipitation, are fast responding components, which will stabilise quickly if emissions are stopped quickly. Other aspects such as sea level rise are irreversible and will take thousands of years to stabilise even after anthropogenic emissions are halted.

To stabilise climate requires carbon dioxide (CO₂) emissions to reach at least approximately net zero and emissions of remaining greenhouse gases to be substantially reduced on a sustained basis. It is still possible to attain the Paris Agreement goal of keeping global temperature increases well below 2°C while striving to limit warming to 1.5°C if global CO₂ emissions are reduced to net zero (or below) by approximately mid-century and emissions of other greenhouse gases are simultaneously substantially reduced.

Human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability. Some development and adaptation efforts have reduced vulnerability. Across sectors and regions, the most vulnerable people and systems are observed to be disproportionately affected. The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt (High confidence) (IPCC AR6, WG11⁶¹).

5.3.6.2 National Context

In Ireland, and in line with global patterns, annual average temperatures are now approximately 0.9°C higher than they were in the 1900s. In Ireland the last 30 years show an almost 7% increase in annual precipitation. Global sea level increased by approximately 0.20 m between 1901 and 2018, and the EPA's Ireland's Climate Change Assessment (ICCA) Report (2023) states that recent studies have highlighted greater than

⁶¹ IPCC (2023). Climate Change 2023 Synthesis Report. Available at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf

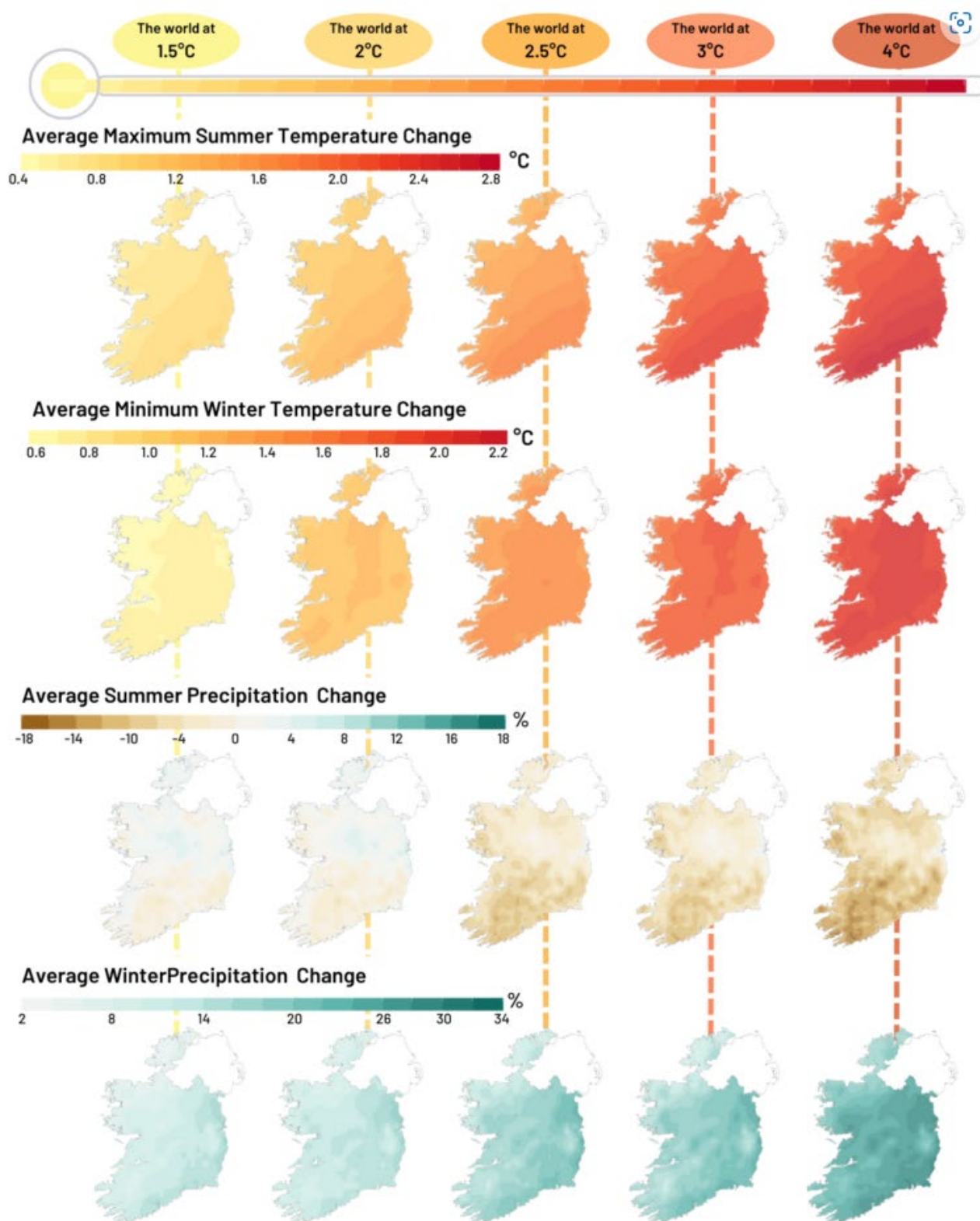
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expected sea level rise in Cork and Dublin (EPA, 2023)⁶². Climate change under early, middle, and late action climate model scenarios show very different futures for Ireland. All model projections show higher temperatures and an increase in annual precipitation, extreme events will become more common and more extreme (Met Éireann, 2023)⁶³.

Figure 5.13 shows the annual minimum and maximum temperature change for Ireland in response to global temperature changes. It is projected that as global temperatures increase as a result of climate change, there will be an increase in average maximum summer temperatures and average minimum winter temperatures. Furthermore, it is projected that there will be a decrease in average summer precipitation and increase in average winter precipitation (Met Éireann, 2023)⁶³.

⁶² EPA (2023). Ireland's Climate Change Assessment. Synthesis Report. Available at: https://www.epa.ie/publications/monitoring--assessment/climate-change/ICCA_Synthesis_Report.pdf

⁶³ Met Éireann (2023). TRANSLATE: One Climate Resource for Ireland [TRANSLATE - Met Éireann - The Irish Meteorological Service](#)



With every increment of global warming, changes in mean climate and extremes become more widespread and pronounced. The following figure demonstrates what this means for Ireland relative to 1976 - 2005 baseline.

Source: Met Éireann, TRANSLATE: One Climate Resource for Ireland. Available at: <https://www.met.ie/science/translate>

Figure 5.13: Average Projected Temperature Change for Ireland (Met Éireann TRANSLATE)

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The EPA research report, Research 386: The Status of Ireland's Climate, 2020 (EPA, 2021)⁴⁷ provides a synthesis of the key climate-related changes recorded for the atmosphere, ocean and terrestrial aspects of Ireland's environment. The report states the following:

Atmosphere

- *"Measurements of the main greenhouse gases – carbon dioxide, methane and nitrous oxide – at Mace Head, Co. Galway, show continued increases in levels, and those measured in 2019 are the highest observed since measurements began.*
- *Background carbon dioxide concentrations are now at 413 ppm [parts per million], which is estimated to be 50% higher than those of the pre-industrial era, while those of methane are at 1940ppb, representing an approximately 170% increase compared with pre-industrial levels. Nitrous oxide concentrations are now above 330 ppb [parts per billion], which is a 20% increase compared with pre-industrial levels.*
- *Concentrations of chlorofluorocarbons (CFCs) have been dropping since 2004, following the implementation of the Montreal Protocol in 1989, banning the production and use of CFCs.*
- *The annual average surface air temperature in Ireland has increased by approximately 0.9°C over the last 120 years, with a rise in temperatures being observed in all seasons. This compares with a global average temperature estimated to be 1.1°C above pre-industrial levels.*
- *The number of warm spell days has increased slightly over the last 60 years, with very little change in cold spell duration. This is in line with what has been observed in many regions of the world.*
- *Annual precipitation was 6% higher in the period 1989–2018, compared with the 30-year period 1961–1990, and the decade 2006–2015 has been the wettest on record. An overall increase in precipitation has been observed across northern hemisphere mid-latitude land areas during the last 70 years.*
- *Analysis of wet and dry spells demonstrates an increase in the length of wet spell days across the country. No trend is apparent in dry spell days.*
- *Atmospheric sulphur levels show an approximately 80% reduction over a 35-year period (1980–2015), highlighting the success of regulation and technological advances. Nitrogen oxide emissions decreased by more than 38% between 1990 and 2018, due primarily to improvements in the Moneypoint power plant.*
- *Other materials, including organic matter and black carbon/soot, now dominate the background aerosol composition."*

Ocean

- *"Satellite observations indicate that the sea level around Ireland has risen by approximately 2–3mm per year since the early 1990s, and analysis of sea level data from Dublin Bay show a rise of approximately 1.7mm per year since 1938, consistent with global average rates.*
- *The average sea surface temperature measured at Malin Head was 0.47°C higher over the last 10 years compared with the period 1981–2010.*
- *Measurements in the surface waters to the west of Ireland between 1991 and 2013 indicate an increase in ocean acidity that is comparable to the rate of change in other global ocean time series.*
- *Observations of some potentially harmful phytoplankton species since 1990 show an expansion of their growth season, with their presence being observed in almost all winter months since 2010."*

Terrestrial

- *"River flows are generally increasing, although, when more recent data for a shorter period have been analysed, there are indications that flows may be decreasing in the south and east of the country.*
- *Land cover observations since 1990 show increases in the areas covered by artificial surfaces and forest, while there is a decrease in wetland areas. The volume of growing stock in forests increased by 38% over the period 2006–2017, thereby increasing the amount of carbon sequestered in forests. Long-term carbon storage in forests will be determined by the dynamic balance between growth and harvesting rates."*

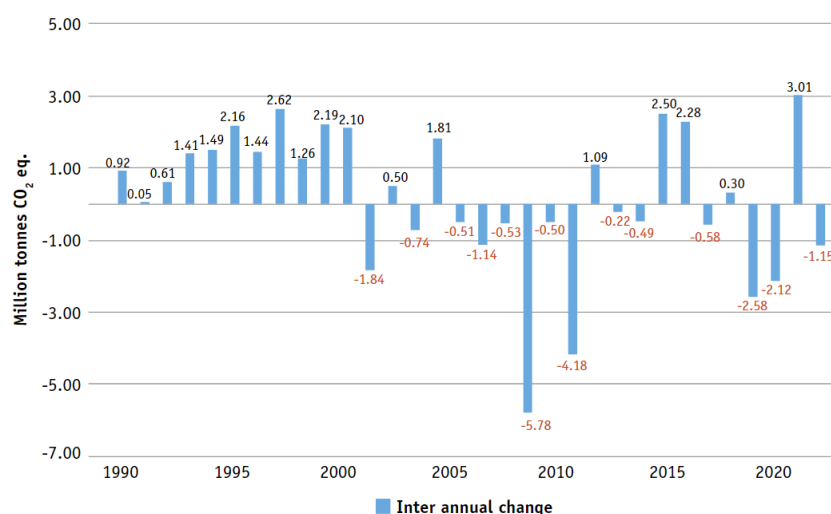
5.3.6.3 Ireland's Greenhouse Gas Emissions

Greenhouse Gas Emissions Overview

Greenhouse gases (GHGs) in the atmosphere are rising as a result of human activity, in particular the burning of fossil fuels for heating, energy and transport, in addition to other activities such as agriculture, the residential and commercial sectors, as well as waste. As of 2021, the EPA reports⁶⁴ that, Ireland has the third-highest per capita GHG emissions in the EU (behind Luxembourg and Iceland) (EEA, 2020⁶⁴).

The EPA in its report, Ireland's Final Greenhouse Gas Emissions 1990-2022 (May 2024)⁶⁵ sets out Ireland's GHG latest emissions data. Ireland's national emission reduction objectives as set in the Climate Action and Low Carbon Development (Amendment) Act 2021, are to achieve a 51% emissions reduction (including LULUCF) by 2030 compared to 2018 and achieve a climate neutral economy by no later than the end of 2050. There are also annual binding emission allocations over the 2021-2030 period to meet that target. The EPA reported that for 2022, total national GHG emissions (excluding LULUCF) are estimated to have decreased by 1.9% on 2021 levels to 60.60 million tonnes carbon dioxide equivalent (Mt CO₂eq).

Agriculture is the largest contributor to the overall emissions at 38.5% of the total (excluding LULUCF). *Transport* and *Energy Industries* are the second and third largest contributors at 19.4% and 16.6% respectively. *Residential* and *Manufacturing Combustion* emissions account for 9.5% and 7.1% respectively. These five sectors accounted for 91.2% of national total emissions in 2022. The remainder is made up by the *Industrial Processes* sector at 3.8%, *F-Gases* at 1.2%, *Commercial Services* at 1.3%, *Public Services* at 1.1% and *Waste* at 1.4%. **Figure 5.14** presents the inter-annual change in total GHG emissions; 1990 is the historical base year used by most countries in relation to UNFCCC reporting. Sectoral shares of emissions are presented in **Figure 5.15** show the GHG emissions by sector. Ireland's emissions profile has changed considerably since 1990, with the contribution from transport more than doubling and the share from agriculture reducing since 1998. However, since 2011, emissions have trended upwards again with an overall peak in emissions reported in 2021. Between 1990 and 2022, *Transport* shows the greatest overall increase of GHG emissions at 128.5%, with road transport increasing by 132.6%.



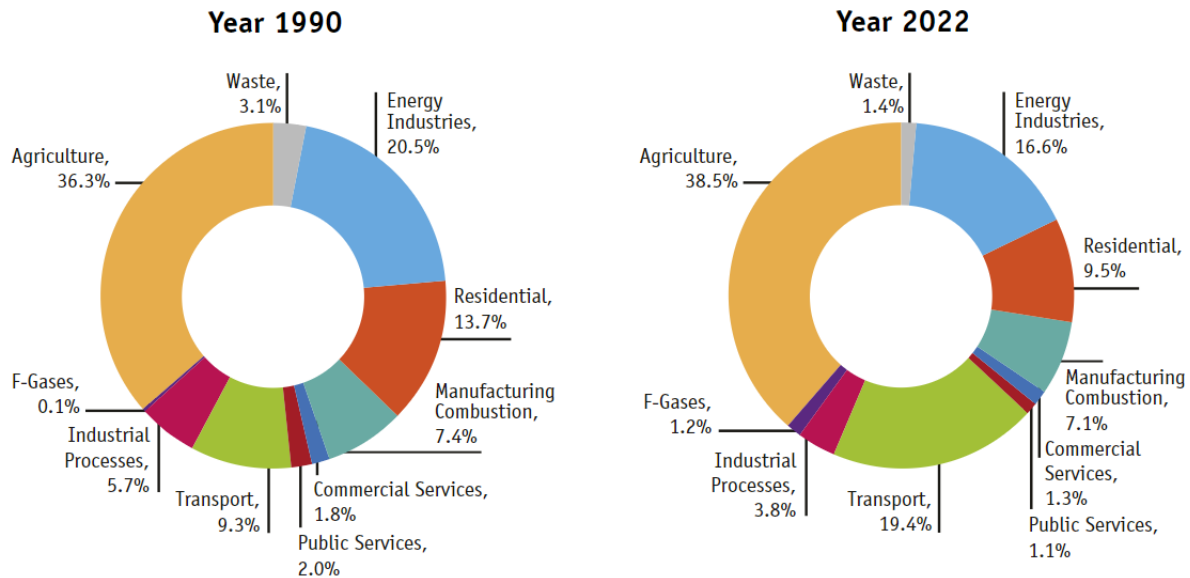
Source: EPA (May 2024). Figure 1 from Ireland's Final Greenhouse Gas Emissions 1990-2022. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-final-greenhouse-gas-emissions-1990-2022.php>

Figure 5.14: Inter-annual changes in GHG emissions 1990-2022

⁶⁴ EEA (2020). EEA Country Profiles – greenhouse gases and energy 2020. Available at: <https://www.eea.europa.eu/themes/climate/trends-and-projections-in-europe/climate-and-energy-country-profiles/country-profiles-greenhouse-gases-and-1>

⁶⁵ EPA (May 2024) Ireland's Final Greenhouse Gas Emissions 1990-2022. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-final-greenhouse-gas-emissions-1990-2022.php>

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Source: EPA (May 2024). Figure 2 from Ireland's Final Greenhouse Gas Emissions 1990-2022. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-final-greenhouse-gas-emissions-1990-2022.php>

Figure 5.15: Comparison of GHG Emissions Share by Sector (excl. LULUCF), 1990 versus 2022

Decreases in emissions were observed in all sectors except for *Transport* and *Waste* and *Commercial Services*, with increases in emissions of +6.0% and +6.6% respectively, while *Commercial Services* remained unchanged at 0.0%; refer to **Table 5-10**.

Table 5-10: Ireland's National GHG Emissions Changes 2021 – 2022

Sector, Mt CO ₂ eq	2021	2022	% Change
Agriculture	23.436	23.357	-0.3%
Transport	11.089	11.751	+6.0%
Energy Industries	10.262	10.078	-1.8%
Residential	6.879	5.787	-15.9%
Manufacturing Combustion	4.614	4.302	-6.8%
Industrial Processes	2.472	2.288	-7.4%
F-Gases	0.745	0.741	-0.5%
Commercial Services	0.765	0.765	0.0%
Public Services	0.672	0.657	-2.2%
Waste	0.823	0.878	+6.6%
LULUCF	4.628	3.983	-13.9%
Total excluding LULUCF	61.755	60.605	-1.9%
Total including LULUCF	66.383	64.588	-2.7%

Source: EPA – Latest Emissions Data [Latest emissions data](#) | [Environmental Protection Agency \(epa.ie\)](#) Note: The Latest Emissions Data page presents final 1990-2022 Inventory data (updated May 2024) and the EPA's latest 2023-2030 projections estimates (updated May 2024)

Greenhouse Gas Emissions Projections

While Ireland has set a national climate objective to deliver a 51% reduction in GHGs by 2030 (compared to 2018 levels, a year set in the Climate Act 2021), under the EU's Effort Sharing Regulation (ESR), Ireland must achieve a binding target of a 42% reduction in GHGs by 2030 (compared to 2005 levels). The ESR includes the sectors which are outside the scope of the Emissions Trading Systems (ETS), and comprise the

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following: agriculture, transport, residential, commercial, non-energy intensive industry, and waste. **Figure 5.16** from the EPA report, Ireland's Greenhouse Gas Emission Projections 2023 – 2050 (EPA, 2024)⁶⁶ compares these targets.

	Base Year	Reduction required by 2030	Scope	Other key points to note
European Union Targets	2005	42% <i>The 42% reduction defines the trajectory, but it is the annual limits that are binding</i>	Sectors covered by the Effort Sharing Regulation (excludes ETS)	Annual binding emission limits (AEAs) define the permitted budget and some flexibilities are available.
National Targets	2018	51%	Economy-wide target (includes ETS)	Unlike the EU target, the national target includes LULUCF. Binding Carbon budgets set the required reduction trajectory.

Source: EPA (May 2024). Figure 2 from Ireland's Final Greenhouse Gas Emissions 1990-2022. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-final-greenhouse-gas-emissions-1990-2022.php>

Figure 5.16: EU and National GHG Reduction Target Comparison

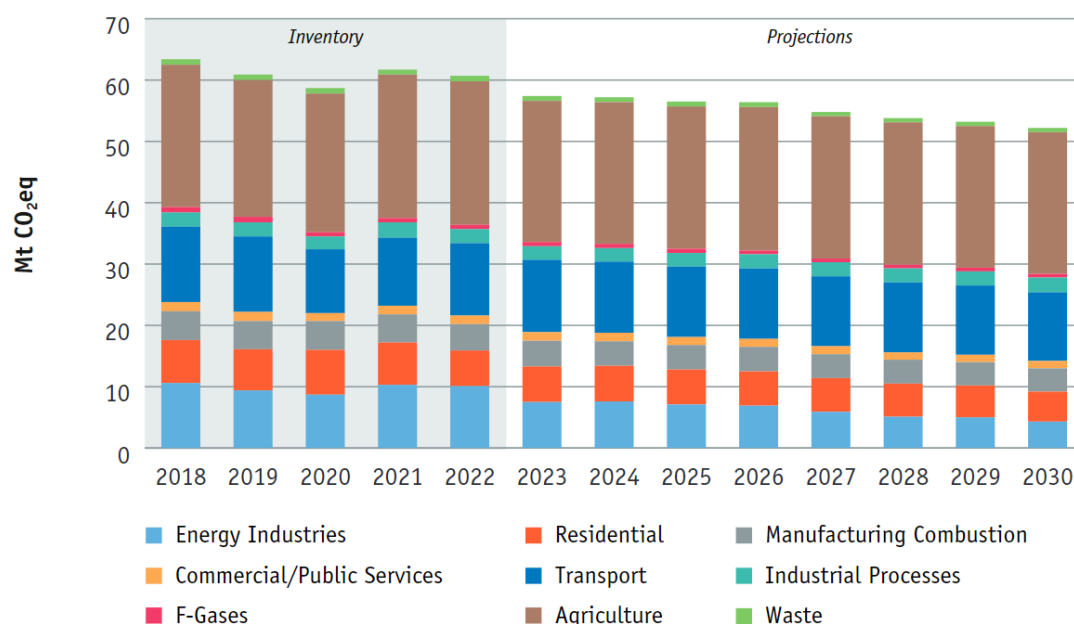
Under the EU's Effort Sharing Regulation (ESR), Ireland also has a target to deliver a 42% reduction of emissions to 2005 levels by 2030. The ESR includes sectors outside the scope of the EU Emissions Trading System (EU-ETS) such as *Agriculture, Transport, Residential, Public/Commercial Services* and *Waste* and is also referred to an 'non-ETS'. ESR emissions are therefore the national total emissions minus the emissions generated by stationary combustion and aviation operators, which fall under the ETS. The final estimates of GHG emissions indicate that Ireland will exceed its EU ESR 2022 annual limit, without the use of flexibilities, by 3.54 Mt CO₂eq (EPA, 2024)⁶⁵.

The latest EPA projections for 2023-2050 show that currently implemented policies and measures (WEM) will achieve a reduction of 9% on 2005 levels by 2030, significantly short of the 42% reduction target and also lower than the 10% reduction projected in the EPA's previous year's projections report. last year's report. If policies and measures in the higher ambition (WAM) scenario are implemented, EPA projections show that Ireland can achieve a reduction of 25% by 2030, still short of the 42% reduction target and also lower than the 30% reduction projected the previous year's estimates.

Figure 5.17 shows the projected reduction in GHG emissions across sectors under the WEM scenario (EPA, 2024)⁶⁶. The *Agriculture* and *Transport* sectors remain the largest contributors of emissions in 2030 in both the WEM and WAM scenarios as a consequence of other sectors of the economy projected to decarbonise faster. Under the WEM scenario, emissions from *Agriculture* and *Transport* are projected to decrease by 1% and 5%, respectively. Under the more ambitious WAM scenario, *Agriculture* and *Transport* are projected to decrease by 18% and 26% respectively over the period 2022 to 2030. The share of total emissions coming from the *Energy Industries* sector (mainly power generation) are projected to decline from 17% in 2022 to 8% in 2030 in the WEM scenario and to 9% in the WAM scenario. This reflects the projected ongoing phase out of coal, oil and gas usage in power generation, implementation of Ireland's renewable power generation production targets and increased electricity interconnection capacity (EPA, 2024)⁶⁶.

⁶⁶ EPA (May 2024) Ireland's Greenhouse Gas Emissions Projections 2023-2050. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-greenhouse-gas-emissions-projections-2023-2050.php>

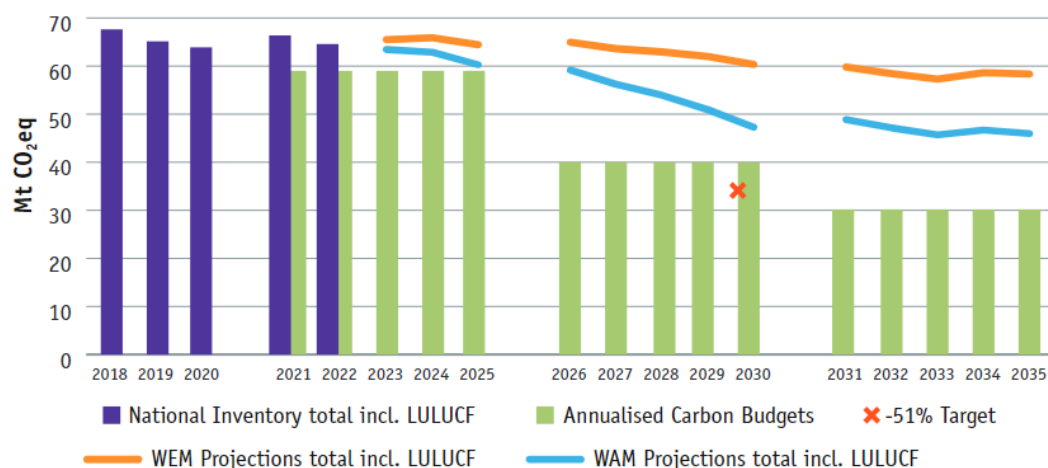
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Source: Figure 6 from EPA (May 2024) Ireland's Greenhouse Gas Emissions Projections 2023-2050. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-greenhouse-gas-emissions-projections-2023-2050.php>

Figure 5.17: Greenhouse Gas Projections (WEM Scenario) by Sector out to 2030

The Climate Action and Low Carbon Development (Amendment) Act 2021 provides for the establishment of carbon budgets to support achieving Ireland's climate action ambition. The 51% target (relative to 2018) is the primary constraint on the budgets over the first two budget periods, which cover the period 2021-2030. The provisional carbon budget proposed for 2031-2035 continues the trajectory that is aiming for climate neutrality by 2050; refer to **Figure 5.18**. This figure is taken from Figure 4 of the EPA Report Ireland's Greenhouse Gas Emissions Projections 2023-2050 (EPA, May 2024). It illustrates Ireland's annualised carbon budgets and the extent to which these budgets are exceeded with the latest projected emissions data, both under the WEM scenario, and under the higher ambition WAM scenario.



Source: Figure 4 from EPA (May 2024) Ireland's Greenhouse Gas Emissions Projections 2023-2050. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-greenhouse-gas-emissions-projections-2023-2050.php>

Figure 5.18: Ireland's Carbon budgets in the context of recent emissions, projections and the 51% emissions reduction target

European Targets under the Effort Sharing Regulation

The EPA reports in Ireland's Final Greenhouse Gas Emissions 1990-2022 (EPA, 2024) that Ireland's Effort Sharing Regulation (ESR) GHG emissions annual limit for 2022 is 42.36 Mt CO₂eq (i.e., for the sectors covered by the annual Climate Action Plans). Ireland's final 2022 GHG ESR emissions are 45.90 Mt CO₂eq

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(3.54 Mt CO₂eq more than the annual limit for 2022). This value is the national total emissions minus emissions generated by stationary combustion (i.e., power plants, cement plants, and domestic aviation operations that are within the EU's ETS). This indicates that Ireland is not in compliance with its 2022 ESR annual limit, exceeding the allocation by 1.63 Mt CO₂eq after using the ETS flexibility, and by 0.81 Mt CO₂eq after utilising both the ETS and LULUCF flexibilities. It should be noted that the final quantity of LULUCF flexibility available to Ireland will be finalised 2032. The Agriculture and Transport sectors accounted for 76.4% of total ESR emissions in 2022; refer to **Table 5-11**.

Table 5-11: Ireland's Compliance with EU Effort Sharing Regulation Targets 2021-2025

	2021	2022	2023	2024	2025
Total greenhouse gas emissions without LULUCF	61,755	60,605			
– Total verified emissions from stationary installations under Directive 2003/87/EC	15,320	14,686			
– CO ₂ emissions from domestic aviation	20	21			
Total ESR emissions	46,416	45,897			
EU ESR Targetst	43,479	42,357	40,520	38,683	36,845
Gross distance to target	-2,936	-3,540			
+ annualised ETS flexibility†	1,908	1,908	1,908	1,908	1,908
+ annualised projected LULUCF flexibility*	822	822	822	822	822
Net distance to target	206	810			

Source: Table 3 from EPA (May 2024) Ireland's Final Greenhouse Gas Emissions 1990-2022. Available at:

<https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland's-final-greenhouse-gas-emissions-1990-2022.php>

Note: The EPA has rounded all numbers in the table to the nearest kt CO₂eq.

* Flexibility projected under the EPA's "With Existing Measures" scenario

† Set out in Annex II and Annex III of Commission Implementing Decision (EU) 2020/2126

Fluorinated Gases

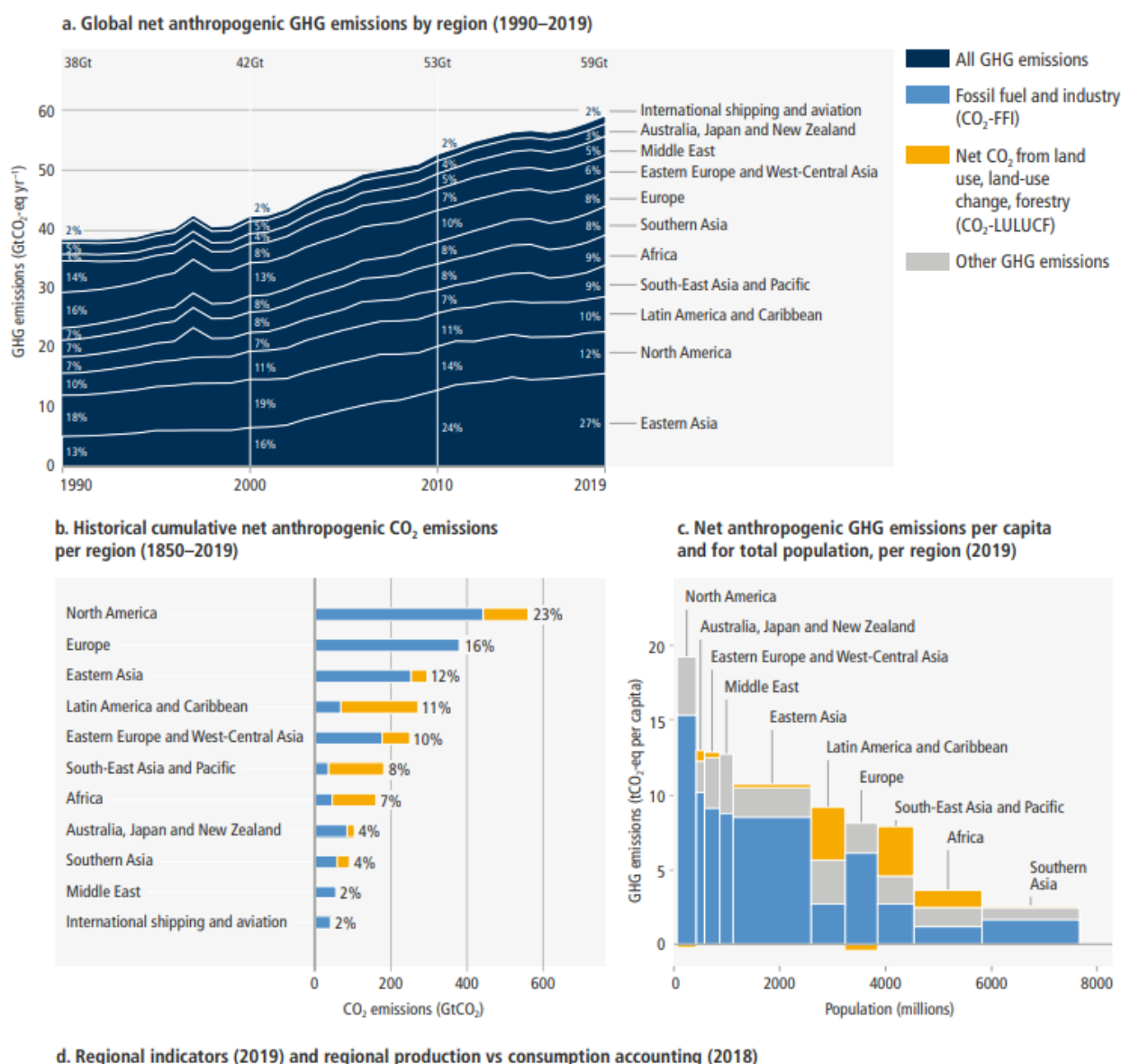
Fluorinated gases (F-gases) were introduced in the 1990s as a replacement for chlorofluorocarbons and hydrochlorofluorocarbons (CFCs and HCFCs), which are gases that damage the Earth's ozone-layer. F-gases are predominately used in refrigeration and air-conditioning systems, including in heat pumps, fire protection, insulation/arc protection for high voltage switch gear (e.g., as found in gas-insulated electricity substations), semiconductor production, as well as in foams, aerosols and metered dose inhalers. While the replacement of CFCs/HCFCs with F-gases instead helped protect the ozone layer, F-gases have a very high global-warming potential (GWP) if released into the atmosphere, ranging up to 24,000 tonnes CO₂ equivalent.

Emissions from F-gases in Ireland decreased by 14.5% from 2019 to 2020, following a decrease of 1.4% in 2019. These decreases are mainly due to changes in the refrigeration and air-conditioning sector where such high GWP F-gases are being phased out in favour of low-GWP alternatives. This phase-out is taking place at EU level and is the main measure introduced by Regulation (EU) No. 517/2014 to tackle F-gas emissions. The EU proposes to further regulate to raise ambition regarding the phase-down in the use of F-gases. As of in 2024, only 23.6% of the amount used in 2015 will be allowed on the market. From 2027, this will decrease to 11%, before steadily approaching zero by 2050.

The rollout of a significant number of heat pumps in the residential sector in particular is a key abatement target in the Climate Action Plan, however heat pumps do currently rely on utilising F-gases as part of the refrigerant system. Other refrigerant options include the use of CO₂, ammonia and propane. There may be implications for the capacity/skilled workforce of the heat pump/refrigerant sectors to comply with the rapid phase-down of F-gases and rollout other options, balanced against the need to rapidly increase the use of heat pumps in much the same timeframe.

5.3.6.4 Climate Mitigation

According to the IPCC 2022 Sixth Assessment Report of the Intergovernmental panel on Climate Change, there has been rise in the total net anthropogenic GHG emissions between 2010–2019, in addition to cumulative net CO₂ emissions since 1850. Average annual GHG emissions during 2010–2019 were higher than in any previous decade, but the rate of growth between 2010 and 2019 was lower than that between 2000 and 2009 [IPCC high confidence] (IPCC, 2022)⁶⁷; refer to **Figure 5.19**.



Source: Figure SPM.2 (a) to (d), IPCC AR6 Working Group III, *Climate Change 2022 – Mitigation of Climate Change*. Available at: https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf

Figure 5.19: Regional GHG Emissions and Regional Proportion of Total Cumulative Production-based CO₂ emissions (1850-2019)

There have been variations in regional contributions to global GHG emissions. Variations in regional, and national per capita emissions partly reflect different development stages, but they also vary widely at similar income levels. For instance, the 10% of households with the highest per capita emissions contribute a disproportionately large share of global household GHG emissions⁶⁷. The 2023 Climate Change Performance Index published by the Climate Action Network, GermanWatch and the New Climate Institute, ranks the performance on climate action of 59 countries and the EU, collectively encompassing 92% of the

⁶⁷ IPCC (2022). *Climate Change 2022: Mitigation of Climate Change* [IPCC_AR6_WGIII_FullReport.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf)

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world's GHG emissions. Ireland remains one of the worst counties within the EU on overall climate action, Ireland ranked 37 in the Climate Change Performance Index 2023 (CCPI, 2022)⁶⁸, although scoring nine spots up, but still scoring a *low* rating. Furthermore, Ireland is ranked 47 in the GHG emissions rating table, and is one of two EU countries to receive a *very low* rating in this category.

According to the IPCC AR6, WGIII, Global GHG emissions in 2030 associated with the implementation of Nationally Determined Contributions (NDCs) announced prior to COP26 would make it likely that warming will exceed 1.5°C during the 21st century (IPCC, 2022)⁶⁹. In order to limit global warming to below 2°C, there will need to be rapid acceleration of mitigation measures. Urban areas contribute a significant share to overall GHG emissions. There can be opportunities to increase resource efficiency and significantly reduce GHG emissions in urban areas through the systemic transition of infrastructure and urban form through low-emission development pathways towards net-zero emissions. Mitigation measures will encompass (i) reducing or changing energy and material consumption, (ii) electrification, and (iii) enhancing carbon uptake and storage in the urban environment. In order to achieve net zero emissions in cities, emissions should be reduced within and outside of their administrative boundaries through supply chains, which will have beneficial cascading effects across other sectors⁶⁹.

Within the transport sector, emission reductions can occur through demand-side options and low-GHG emissions technologies. Emission mitigations for land based transport is supported by the use of electric vehicles and sustainable biofuel options, and modal shift to public transport and active travel. For shipping and aviation, emission mitigation is supported by the use of sustainable biofuels, low-emissions hydrogen, and derivatives (including synthetic fuels).

Mitigation measures in existing and new buildings can support the net zero GHG emission in 2050 target. This can occur if policy packages, which combine ambitious sufficiency, efficiency, and renewable energy measures, are effectively implemented and barriers to decarbonisation are removed.

5.3.6.5 Climate Adaptation

The Climate Action and Low Carbon Development Act 2015 provides a legal definition for adaptation as adjustment to any system designed or operated by humans, including an economic, agricultural, or technological system, or any naturally occurring system, including an ecosystem, that is intended to counteract the effects of climate change, prevent or moderate environmental damage resulting from climate change, or confer environmental benefits.

In the context of climate change, risks emerge from the interactions between climate change and related hazards (heatwaves, floods, droughts etc.), exposure and vulnerability. Risk is in constant evolution as the frequency and intensity of weather extremes increase and as exposure and vulnerability change. Therefore, adaptation should be seen as iterative risk management process (IPCC, AR6, WGII, 2022)⁷⁰, that responds to the dynamics and evolution of risk, where emphasis is placed on ongoing processes of assessment, action, monitoring, evaluation, learning and improvement.

Widespread, pervasive impacts to ecosystems, people, settlements, and infrastructure have resulted from observed increases in the frequency and intensity of climate and weather extremes, including hot extremes on land and in the ocean, heavy precipitation events, drought, and fire weather. These extremes are occurring simultaneously, causing cascading impacts that are increasingly difficult to manage, (IPCC, AR6, WGII, 2022)⁷⁰.

The Climate Action and Low Carbon Development Act 2015 also provided for a National Adaptation Framework which contains Ireland's strategy for the application of climate adaptation measures to reduce the vulnerability of the State to the negative effects of climate change, and to seek opportunities for any positive effects that may occur. The first NAF was published in 2018 and was recently reviewed and updated, with a new NAP adopted in June 2024⁷¹.

⁶⁸ CCPI (2022). Climate Change Performance Index 2023 [Climate Change Performance Index 2023 | Climate Change Performance Index \(ccpi.org\)](https://www.ccpi.org/)

⁶⁹ IPCC (2022). Summary for Policy Makers Headline Statements [WGIII Summary for Policymakers Headline Statements \(ipcc.ch\)](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WG3_SPM.pdf)

⁷⁰ IPCC (2022). Climate Change 2022: Impacts, Adaptation and Vulnerability https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf

⁷¹ DECC (2024). [National Adaptation Framework. Planning for a Climate Resilient Ireland 2024](https://www.gov.ie/en/publications-and-resources/publication/national-adaptation-framework-planning-for-a-climate-resilient-ireland-2024/).

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In line with the 2018 Framework, twelve sectoral adaptation plans (SAPs) were published between 2019 and 2020. These sectoral plans identified the key risks faced across the sectors including agriculture, biodiversity, built and archaeological heritage, transport infrastructure, electricity and gas networks, communications, flood risk management, water quality and services infrastructure and health and the approach being taken to address these risks and build climate resilience for the future. The SAPs include actions that:

- Mainstream adaptation into key sectoral plans and policies;
- Identify and understand the key vulnerabilities, risks, and opportunities facing specific sectors, as well as major risks cross cutting different sectors;
- Ensure climate-proofing of strategic emergency planning;
- Identify and collect information on the costs and benefits of adaptation within specific sectors;
- Build capacity within sectors to cope with climate change;
- Identify and address key research gaps within their sectors;
- Improve co-ordination with the local government sector; and
- Develop appropriate monitoring and verification systems within sectors.

The SAPs are to be reviewed every five years. The next iterations of the SAPs will need to be reviewed and developed in line with the new NAF 2024.

There have been documented benefits and varying effectiveness of adaptation and planning across all sectors. However, there are still adaptation gaps which will continue to grow. In some regions and ecosystems hard and soft limits to adaptation have been reached, as well as maladaptation in some sectors and regions. Maladaptive responses to climate change can create lock-ins of vulnerability, exposure and risks that are difficult and expensive to change and exacerbate existing inequalities. Maladaptation can be avoided by flexible, multi-sectoral, inclusive, and long-term planning and implementation of adaptation actions with benefits to many sectors and systems (high confidence) (IPCC, 2022)⁷⁰.

Due to increasing global warming, adaptation options will become constrained and less effective. In order to reduce projected losses and damages for humans and ecosystems, it is fundamental to accelerate the implementation of deep, rapid, and sustained mitigation and adaptation actions.

5.3.6.6 Climate Actions and Societal Transformation

The EPA Climate Change in the Irish Mind Climate Opinions Map (EPA, 2023)⁷² shows how climate change beliefs, risk perceptions, and policy support vary at the county and regional levels. The maps are based on the Climate Change in the Irish Mind study (CCIM), a nationally representative survey collected from May through July of 2021.

Based on public opinion estimates from Ireland 2022, 85% of the overall population are worried about climate change. 47% of the population believe that they are being harmed right now by climate change and 22% believe that they will be harmed within the next 10 years.

Nearly all Irish residents think that either future generations of people (95%), people in developing countries (94%), and plant and animal species (94%) will be harmed “a great deal” or “a moderate amount” by climate change. More than three in four think that each of these groups will be harmed “a great deal”. About eight in ten think people in Ireland (82%) will be harmed, and seven in ten or more think their family (76%), people in their community (75%) and the Irish way of life (72%) will be harmed. Two in three think Irish historic sites (66%) will be harmed (EPA, 2021)⁷³.

Approximately one third of the population (33%) correctly identified agriculture as Ireland’s source of the pollution that causes climate change. This was followed by transport (23%), energy industries (22%), the waste sector (16%) and the residential sector (6%); refer to **Figure 5.20** (EPA, 2021).

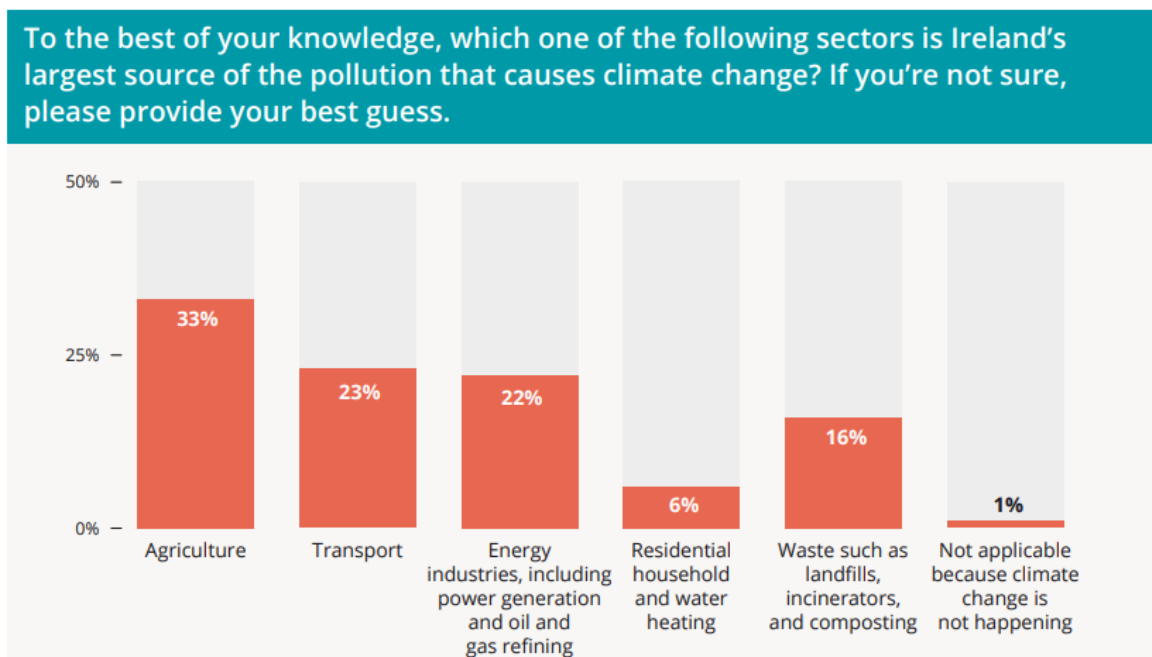
In addition, the survey suggested high levels of engagement among Irish residents on climate change, with 91% of people say climate change is important to them personally, and 72% of people report that they

⁷² EPA (2023). Climate Change Opinion Maps [Climate Opinion Maps | Environmental Protection Agency \(epa.ie\)](https://www.epa.ie/publications/ClimateChangeOpinionMaps/)

⁷³ EPA (2021). Climate Change in the Irish Mind [Climate Change in the Irish Mind \(epa.ie\)](https://www.epa.ie/publications/ClimateChangeintheIrishMind/)

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“often” or “occasionally” discuss climate change with family and friends. 79% of Irish residents believe that climate change should be a “very high” or “high” priority for Government.



Source: EPA (2021) *Climate Change in the Irish Mind – Climate Belief and Attitudes*, Section 1.4. Available at: <https://www.epa.ie/publications/monitoring--assessment/climate-change/climate-change-in-the-irish-mind.php>

Figure 5.20: Public Opinion on Irish Sectors that are the Largest Contributor to Climate Change

5.3.6.7 Existing Environmental Pressures/ Problems: Climatic Factors

The most recent EPA GHG emissions inventory and projection reports have highlighted the challenges that Ireland faces in achieving the scale and pace of GHG emissions reduction required to stay within the first two carbon budgets and reduce emissions by 51% relative to 2018. The first two carbon budgets (2021-2030), which aim to support achievement of the 51% emissions reduction goal for 2030, are projected to be exceeded by a significant margin of between 17% and 27%. Sectoral emissions ceilings for 2025 and 2030 are projected to be exceeded in almost all cases, including for the *Agriculture*, *Electricity*, *Industry* and *Transport* sectors. The EPA GHG inventory for 2022⁸ shows that total national emissions in 2022 (including from LULUCF) decreased to 64.588 Mt CO₂eq, which is -2.7% below the 2018 reference year. National GHG emissions decreased 1.9% in 2022; the decrease in emissions between 2022 and 2021 are reflected in most of the large sectors with the exception of increases in *Transport* and *Waste* between 2021 and 2022.

In order for the savings projected in the WAM scenario to materialise, the EPA reports in its 2024 Key Messages (EPA, 2024⁷⁴) that full and early implementation of the Climate Action Plan 2024⁷⁵ is needed if the savings projected in the With Additional Measures scenario are to materialise. The scale and pace of the changes needed are significant, requiring much greater reliance on renewables, cross-cutting measures such as a €100 per tonne of CO₂ carbon tax by 2030, and further ambitious measures in sectors such as *Transport*, *Agriculture* and *Power Generation*. In the *Electricity* sector, with 49% of the 2021-25 emissions budget already used, annual emissions reductions of 17% are now required from 2023-25 to stay within budget. Annual emissions reductions of 9%, 8%, 6% and 3% are required from 2023-25 in the *Industry*, *Agriculture*, *Transport* and *Residential buildings* sectors respectively.⁶⁵

In terms of EU targets, Ireland will also not meet its EU Effort Sharing Regulation (ESR)/non-ETS target of a 42% emissions reduction by 2030 in the WAM scenario, even with both of the ETS and LULUCF flexibilities

⁷⁴ EPA (2024). Key Messages [Key messages | Environmental Protection Agency \(epa.ie\)](https://www.epa.ie/publications/monitoring--assessment/climate-change/climate-change-in-the-irish-mind.php)

⁷⁵ DECC (2024). Climate Action Plan 2024. Available at: <https://www.gov.ie/en/publication/79659-climate-action-plan-2024/>

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applied. For Ireland's ESR GHG emissions annual limit for 2022, Ireland is not in compliance, exceeding the allocation by 1.63 Mt CO₂eq after using the ETS flexibility, and exceeding by 0.81 Mt CO₂eq after using both ETS and LULUCF flexibilities (it should be noted that the final quantity of LULUCF flexibility available to Ireland will be finalised in 2032). The *Agriculture* and *Transport* sectors accounted for 76.4% of total ESR emissions in 2022.

The SEAI's Interim National Energy Balance for 2023⁷⁶ shows that energy-related emissions have decreased by 7.3%, the lowest level in 30 years. However, Ireland is not yet on track to remain within its 2021-2025 carbon budget, and to remain within this requires higher annual reductions of over 11% for 2024 and 2025.

Communities, non-governmental organisations and the private sector must be involved in adaptation planning and implementation. In this context, the key issues associated with the implementation of the draft first revisions to the NPF, and climatic factors relate to:

- Challenge for Ireland to meet the sectoral emissions ceiling budgets and the pace of change required to achieve this – the EPA Report, Ireland's Greenhouse Gas Emissions Projections 2022-2040 (EPA, 2023) states that the first two carbon budgets (covering the period 2021-2030), which aim to achieve the 51% emissions reduction goal for 2030, are projected to be exceeded by a significant margin of between 24% and 34%.
- The importance of climate change mitigation e.g., via coordinated urban and spatial planning, active travel and modal shift.
- The importance of climate change adaptation, including e.g., building resilience to the effects of changing climatic and environmental conditions (such as severe weather events), need for coastal zone management, flooding and flood risk management etc.
- Potential for climate mitigation and adaptation co-benefits (across Air, Water, Population and Human Health, etc.) e.g., climate action is urgently needed and can realise co-benefits arising from reducing solid fuel bringing and modal shift, with consequent improvements for air quality and human health.
- Supporting the transition to a climate-neutral economy and contribution to renewable energy/heat targets.
- Potential for maladaptation i.e., planning for adaptation to climate change is based on uncertainty and risks.
- Poor planning at each level of the planning hierarchy may result in adaptation strategies may fail or make situations worse.

5.3.7 Material Assets

There is no clear definition of material assets under the SEA Directive, or indeed the EIA Directive. Material assets primarily relate to the infrastructural assets that enable an area or a state to function as a place to live and work and can be taken to be infrastructure including settlements (towns and villages etc.), transport and utilities (including waste facilities). It typically overlaps with other areas such as population, climate, land and soils etc. Natural resources such as land use and soils also have material asset value and are covered in **Section 5.3.3**. The baseline relevant to the draft first revision to the NPF in relation to Material Assets is as follows:

- Transport – public and private. Modal including road, rail, ports, cycleways, pedestrian etc.
- Energy – Electricity, gas, grid capacity, renewable energies.
- Water services – Water and wastewater.
- Waste and resources – circular economy and waste management.
- Communications – broadband availability and rollout.

⁷⁶ SEAI (2024). Interim National Energy Balance for 2023. Available at: <https://www.seai.ie/data-and-insights/seai-statistics/key-publications/national-energy-balance/>

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- Infrastructure – national strategic projects.

5.3.7.1 Transport

Road and Rail Infrastructure

The total length of the national road network in Ireland is approx. 5,300 km. National primary roads comprise approx. 2,650 km in length and national secondary roads comprise approx. 2,660 km. Motorways comprise approx. 916 km; of this, approximately 320 km is operated by Public Private Partnerships. Other road infrastructure is comprised of local roads, minor roads and unclassified urban roads. Transport Infrastructure Ireland (TII) operates, maintains and improves the national primary and secondary road network in Ireland. Local authorities manage the urban and remote sections of dual carriageway, national secondary, regional, and local roads; refer to **Figure 5.21** for an overview of the national primary and secondary road network.



Source: TII. Available at: https://www.tii.ie/roads-tolling/our-road-network/NationalMap_Motorway2017-Updated.png

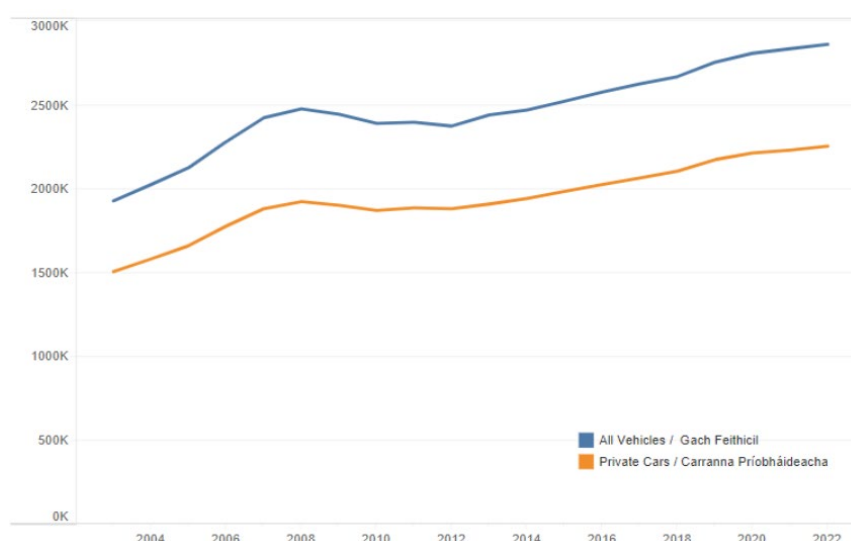
Figure 5.21: TII National Primary and Secondary Road Network

Vehicular traffic is by far the most common mode of travel in Ireland. The Department of Transport reported in 2022 that the national vehicle fleet was made up of 2,919,005 vehicles, which represented an increase of 28,030 vehicles since the previous year (Department of Transport, 2022)⁷⁷. The main components of the vehicle fleet include 2,255,971 private cars, 389,184 goods vehicles, 79,486 agricultural and general haulage tractors, 56,114 vintage vehicles and 47,235 motorcycles. **Table 5-12** shows the change in new vehicles between 2021 and 2022; the data indicates an overall decrease in the number of vehicles on Irish roads between 2021 and 2022, however this amount to just -3.6%. In general, the overall trend is an increasing number of vehicles on Irish roads since 2003 (**Figure 5.22**).

Table 5-12: New Vehicles Registered in 2021 and 2022

Description	2021	2022	Change	% Change
Private Cars	101,853	101,349	-504	-0.49%
Goods Vehicles	28,387	23,655	-4,732	-16.67%
Motorcycles	2,335	2,871	+536	+22.96%
Tractors	2,491	2,368	-4,732	-16.67%
Other Vehicles	1,706	1,471	-235	-13.77%
All Vehicle Types	142,376	137,248	-5,128	-3.60%

Source: Department of Transport (April 2023) Irish Bulletin of Vehicle and Driver Statistics 2022. Available at: <https://www.gov.ie/en/publication/f392d-bulletin-of-vehicle-and-driver-statistics/>



Source: Figure 1, Department of Transport (April 2023) Irish Bulletin of Vehicle and Driver Statistics 2022. Available at: <https://www.gov.ie/en/publication/f392d-bulletin-of-vehicle-and-driver-statistics/>

Figure 5.22: Trend in Vehicles Statistics 2003-2022

Iarnród Éireann is responsible for over 2,400 km of rail line that makes up the heavy rail intercity and regional network in Ireland, which is used for both passengers and freight. Of this, approximately 17% of the heavy rail network is either disused or dismantled. TII is responsible for the light rail Luas networks that are based in Dublin.

The CSO (2021)⁷⁸ reported that in 2021, Irish licensed vehicles travelled a total of 41.9 billion km with each vehicle travelling, on average, 14,434 km. Private cars accounted for 78% of the total number of licensed vehicles and 72% of the total distance travelled in 2021. In 2021, Irish registered goods vehicles made 8,812 km travelled and a total of 154.9 million tonnes of goods, which was an increase of 10% since 2020 but

⁷⁷ Department of Transport (2022). Irish Bulletin of Vehicles and Driver Statistics [9d7a6354-2599-47f4-b4f4-ad6345ccd297.pdf](https://www.gov.ie/en/publication/f392d-bulletin-of-vehicle-and-driver-statistics/) (www.gov.ie)

⁷⁸ CSO (2021). Transport Omnibus 2021 [Road Traffic Volumes - CSO - Central Statistics Office](#)

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decrease of 3% compared with 2019. A number of key statistics from the CSO Transport Omnibus 2021⁷⁹ in relation to public transport and other modes excluding private cars include:

- 19.5 million passengers travelled on the Luas;
- 17.4 million passengers travelled by rail in 2021; and
- The largest number of journeys by users of the bicycle sharing scheme in Dublin in 2021 was in the month of October when 159,982 journeys were made.

Transport for Ireland (TFI) reports that there are six network maps that cover the cities i.e., Dublin, Cork, Galway, Limerick and Waterford; these maps highlight the different bus, train and tram (Dublin only) routes that are available. In addition, there are maps summarising town bus services available in the Kilkenny, Carlow, Navan and Drogheda areas, as well as the TFI Local Link Bus Services throughout the country. These detailed maps are available on the TFI website.⁸⁰

There is a close correlation between total transport demand on Irish roads and national economic performance. This is illustrated in **Figure 5.23**, which shows that during the economic crash between 2009 and 2012, there was a decline in the total vehicle kilometres of travel by road by 10%, and of goods traffic by 22%. Economic growth began to recover in 2012, which was followed by the overall kilometres travelled by road returning to a pre-crisis level. Since the start of the COVID-19 pandemic there was a weakening in the relationship between the total kilometres travelled and the national economic performance. **Figure 5.23** (TII, 2022)⁸¹ shows a rapid increase in the number of kilometres travelled for all goods vehicles travelled (green line) since 2021, at its highest level ever. However, the total vehicle kilometres travelled in 2021 is lower overall than this (dark blue line) and is closer to 2015 levels, albeit showing some rebound post-COVID on an upwards trend, and likely reflects a proportion of the population that continues to work from home or engages in hybrid working. The ongoing trend and will be important in the context of land use planning for transport infrastructure, as one of the key CAP KPIs is to realise an overall decreasing trend in the number of kilometres travelled. This is an important consideration as compact growth can increase the ‘critical mass’ required to make large-scale modal shift and transport behaviour change more viable and attractive as transport options.

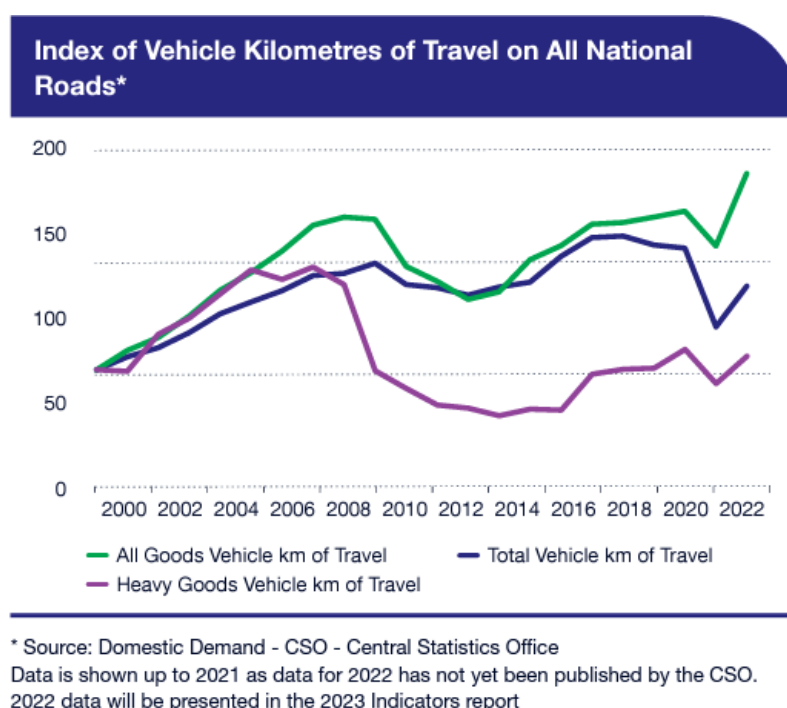


Figure 5.23: Vehicle Kilometres of Travel on All National Roads

⁷⁹ CSO Statistical Publication, November 2022. Transport Omnibus 2021. Available at: <https://www.cso.ie/en/statistics/transport/transportomnibus/>

⁸⁰ TFI maps. Available at: <https://www.transportforireland.ie/plan-a-journey/network-maps/>

⁸¹ TII (May, 2022). National Roads Network Indicators [TII-National-Roads-Network-Indicators-2021.pdf](https://www.tii.ie/indicators/2021.pdf)

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The CSO (2022)⁸² reports that the number of people commuting to work increased by 4% to 1.2 million between 2016 and 2022, with an increase in nearly 260,000 (173%) people working mainly from home. There were 4% fewer people commuting to work by train, LUAS or DART, and fewer third level students commuting to their place of education on foot or by bike, but more used public transport and cars.

Airports and Seaports

There are 10 main airports across Ireland: Cork Airport, Donegal Airport, Dublin Airport, Weston Airport, Galway Airport, Kerry (Farranfore) Airport, Ireland West Airport Knock, Shannon Airport, Sligo Airport and Waterford Airport. Cork, Dublin and Shannon are international airports. The CSO (CSO, 2021)⁷⁸ reports that:

- In 2021, 9.1 million passengers passed through Irish airports in 2021, compared with 8.3 million in 2020 and 28.1 million in 2019;
- Dublin airport accounted for 90% of air passengers in Ireland; and
- The Dublin-Heathrow route carried the most air passengers (404,011) in 2021.
- Twenty commercial ports exist nationwide; international ports include Shannon Foynes, Cork, Dublin Port and Drogheda. In addition, there are 15 international ferry ports, 99 local ferry ports and 48 fishing ports.
- 54 million tonnes of goods were handled by Irish ports; and
- Dublin Port handled 45% of all goods in 2021.

TEN-T Network

As part of wider European infrastructure policy to connect all areas of Europe, Ireland is part of the Trans-European Transport Network (or TEN-T). Under the TEN-T, Ireland has one core network corridor crossing through the country, the North Sea-Mediterranean Corridor. Within Ireland, the core part of this corridor stretches from Belfast and the Irish Ports of Cork and Dublin.

A number of Ireland's motorways make up part of this TEN-T corridor including the M1, M50, M7 and M8 along with the ports of Dublin, Cork and Shannon-Foynes; Dublin International and Cork airports are also identified as core airports within the wider network. This corridor is part of a wider network that stretches across the United Kingdom and Europe and covers rail, road, airports, ports, road/rail terminal (RRTs), the Dutch-Belgian inland waterway system as well as the Rhône River.

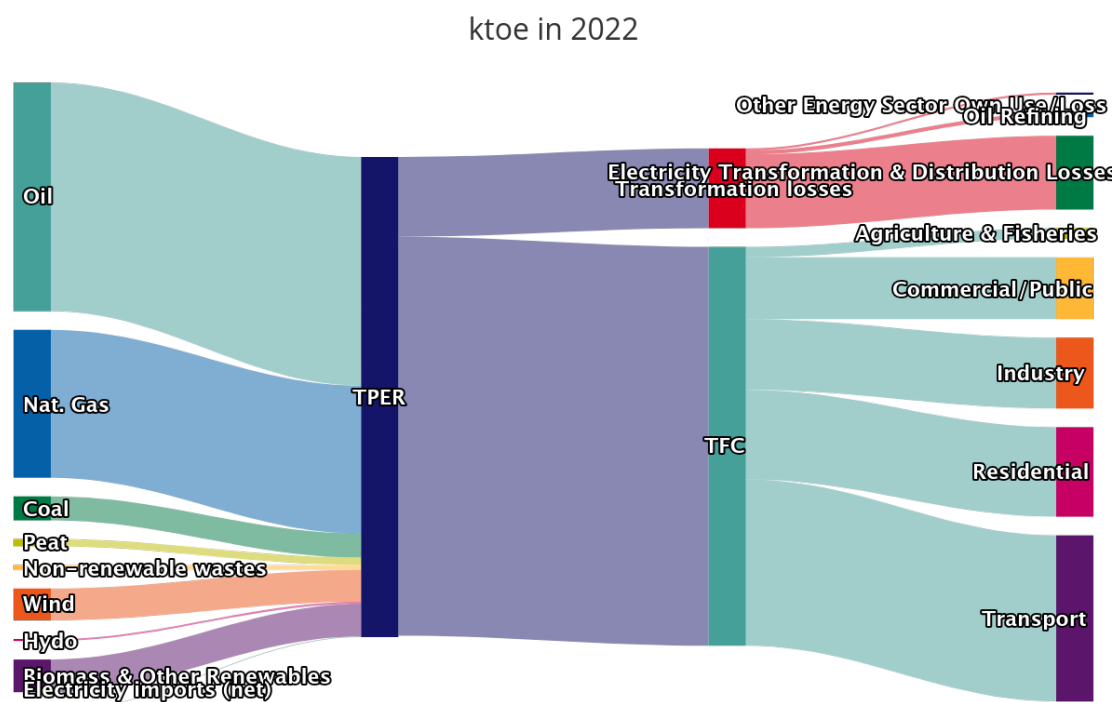
5.3.7.2 Energy in Ireland

Energy Use

The SEAI *Energy in Ireland 2023 Report* (SEAI, December 2023)⁸³ provides information on the primary energy inputs to the energy system and the sources of demand for final energy. **Figure 5.24** shows Ireland's annual energy flow for 2022; this also includes energy lost during transformation processes such as electricity generation and oil refining. Although the electricity system has become more efficient since 2000, it is still at only 53.8% efficiency, meaning almost half of the energy used for electricity generation is lost.

⁸² CSO (2022). Census of Population 2022- Summary Results [Employment, Occupation, Industry and Commuting - CSO - Central Statistics Office](#)

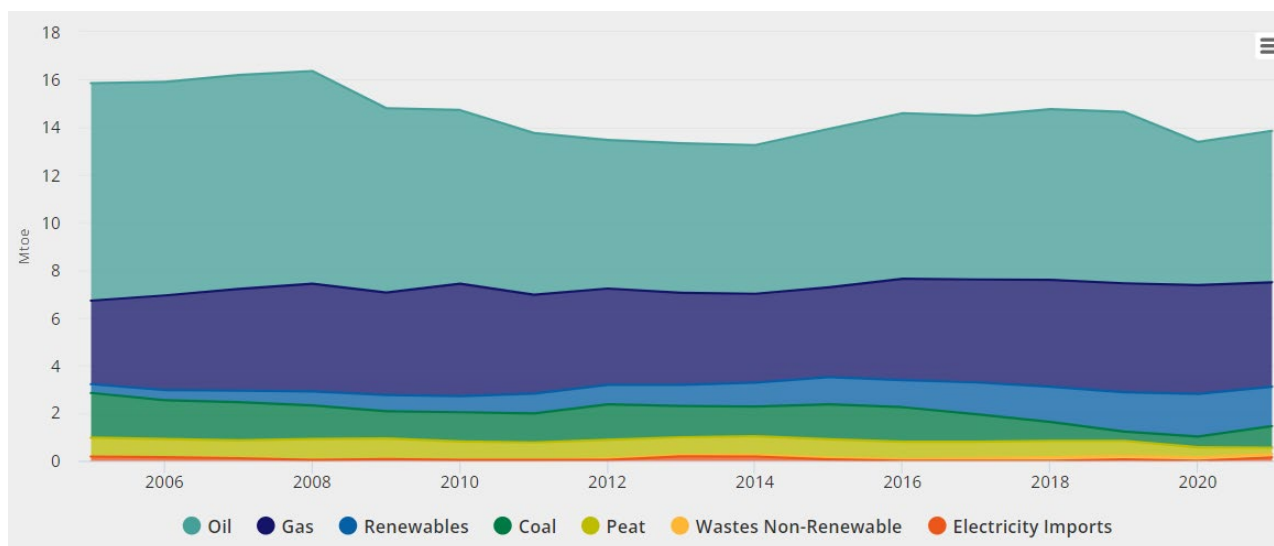
⁸³ SEAI (2023) Energy in Ireland [Energy Use Overview | Energy Statistics In Ireland | SEAI](#).



Source: SEAI. Available at: [SEAI Key Statistics | Energy Use Overview](#) [Accessed April 2024]. Note: The sum of all primary energy is the Total Primary Energy Requirement (TPER). The sum of all final energy used in all sectors is the Total Final Consumption (TFC).

Figure 5.24: Ireland's Annual Energy Flow in 2022

In terms of general trends, there was a peak in total energy requirement before 2008, which was followed by decrease during the economic crisis and reaching a minimum in 2014. There was a drop in 2020 due to impacts from the COVID-19 pandemic and was mainly as a result of drops in oil products; refer to **Figure 5.25**⁸³.



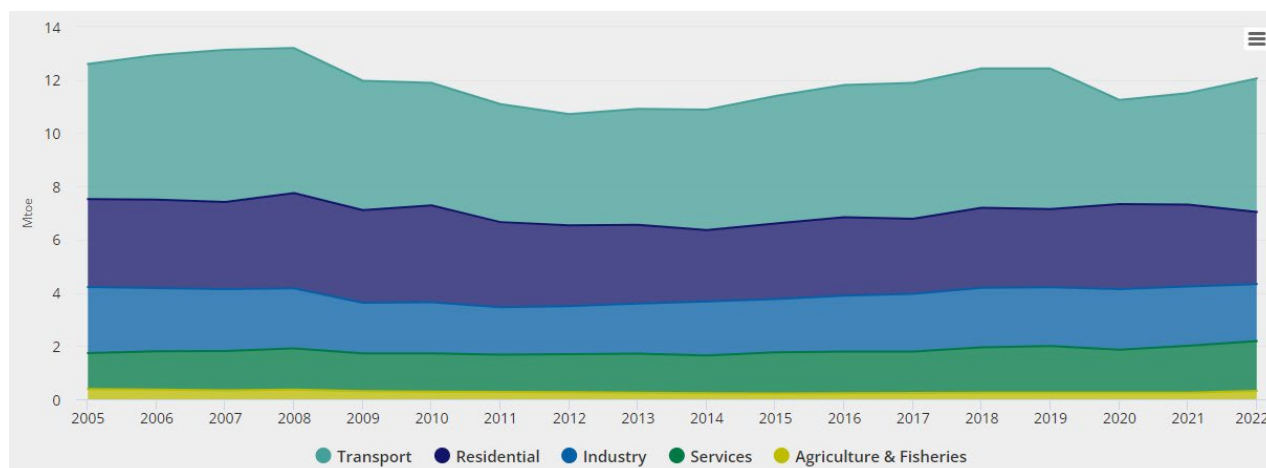
Source: SEAI. Available at: [SEAI Key Statistics | Energy Use Overview](#) [Accessed April 2024]

Figure 5.25: Primary Energy by Fuel Type 2006-2020

Within Ireland, transport is the largest source of final energy demand, accounting for 36.2% in 2021. This is followed by the residential sector (26.8%) and industry (19.1%). Since 2008, there was a reduction across all sectors in final energy use, which is attributed to the international economic downfall. From 2012 onwards, there was an increase for the industry, transport and services sector, and an increase in the residential

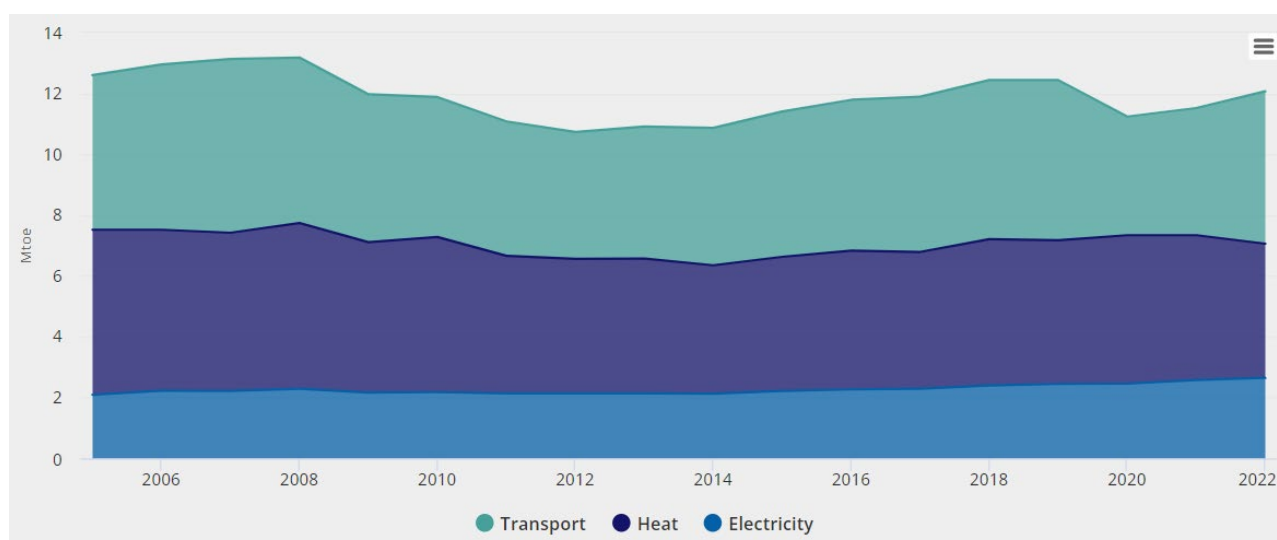
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sector in 2014. There was a reduction in the final energy use in 2020, which is attributed to Covid-19 restrictions; refer to **Figure 5.26**⁸⁴.



Source: SEAI. Available at: [SEAI Key Statistics | Energy Use Overview](#) [Accessed April 2024]

Figure 5.26: Final Energy by Sector 2005-2022



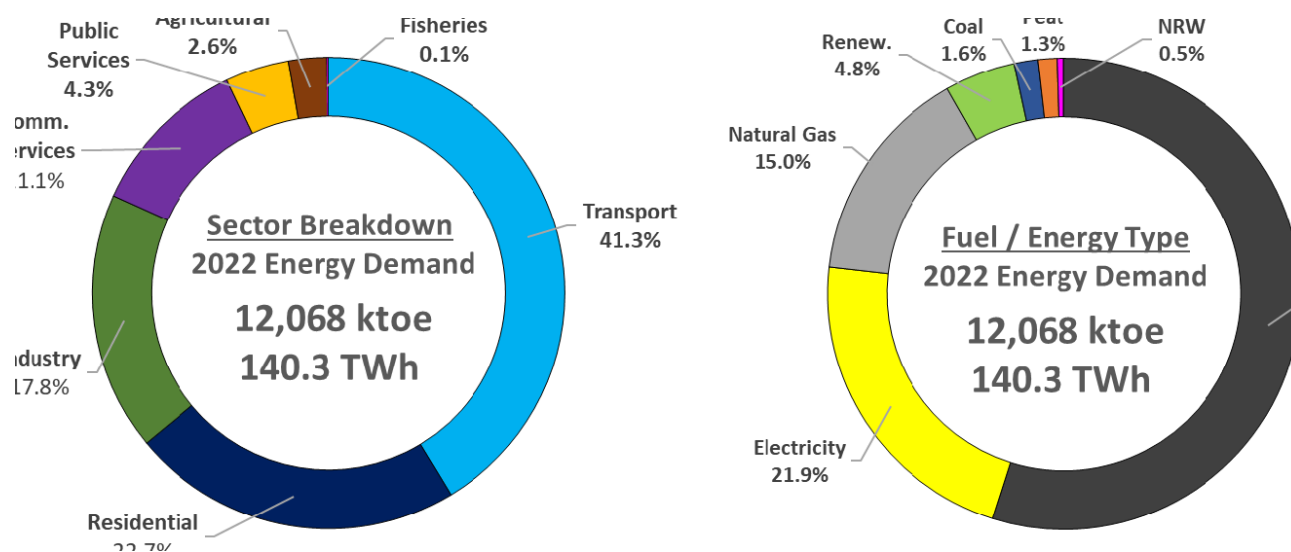
Source: SEAI. Available at: [SEAI Key Statistics | Energy Use Overview](#) [Accessed April 2024]

Figure 5.27: Final Energy by Mode 2005-2022

There was a 4.8% increase in energy demand between 2021 and 2022, which was attributed to the 20.1% increase in energy demand from the transport sector. Residential energy demand in 2022 was 12.0% lower than in 2021. There were demand reductions across coal (-33.1%), peat (-12.7%), oil (-16.0%), natural gas (-9.3%) and electricity (-5.9%). The strongest driver of this demand reduction was likely the higher cost of energy in 2022, but return to-office behaviours, fuel-switching, efficiency improvements, and weather effects likely played a role too. In 2022, oil remained the largest source of Ireland's energy (54.9%), followed by electricity (21.9%) and natural gas (15.0%); refer to **Figure 5.28**⁸⁴.

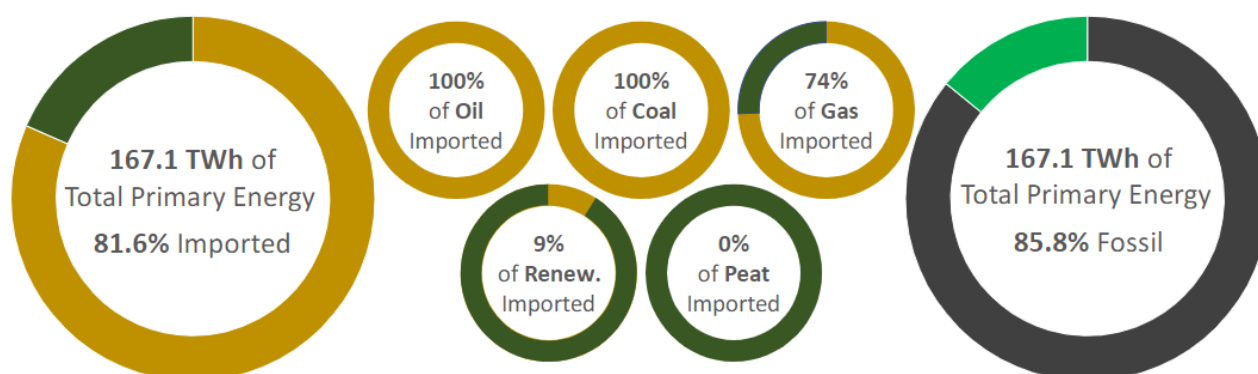
Figure 5.29 illustrates Ireland's energy import and fossil fuel dependency for 2022. The SEAI Energy in Ireland Report (SEAI, Dec. 2023) states that In 2022, Ireland imported 81.6% of its total primary energy requirement, compared to the average energy import dependency of all other EU member states at 57.5% in 2020. Ireland imported all coal and oil products, and 74% of its natural gas supplies in 2022. Ireland imported just 8.8% of its renewable energy in 2022, most of which was biodiesel.

⁸⁴ SEAI (2023). Key Insights from SEAI's 2022 National Energy Balance [Key-Insights-from-2022-National-Energy-Balance.pdf \(seai.ie\)](#).



Source: SEAI (Sept. 2023). Available at: [Key Insights from SEAI's 2022 National Energy Balance, Version 1.1](#) [Accessed April 2024]

Figure 5.28: Energy Demand in 2022 by Sector, Fuel and Energy Type



Source: SEAI (December 2023) *Energy in Ireland 2023*, Figure 1.1. Available at: [SEAI Publications | Energy in Ireland 2023 Report](#)

Figure 5.29: Ireland's 2022 Energy Import Dependency and Fossil Fuel Dependency

The Government set a national target for renewable electricity (RES-E) of 40% for 2020. The SEAI reports that Ireland came in just under this target, achieving 39.1% RES-E in 2020. Electricity generation has however been the most successful out of the three modes – the others being renewable energy sources for transport (RES-T) and renewable energy sources for heat (RES-H) – for the development of energy from renewable sources. Renewable energy (when aggregated) is now the second largest source of electricity after natural gas⁸⁵.

Based on SEAI's latest energy balance from 2022 (SEAI, 2022)⁸⁶, the transport sector accounted for the largest final energy consumption (41.3%), with oil being the greatest source of energy input. This was followed by residential (31.8%), with oil being the greatest source of energy input, and industry (17.8%), with natural gas being the greatest source of input.

Renewable Energy

⁸⁵ SEAI Renewables Dashboard. Available at: [https://www.seai.ie/data-and-insights/seai-statistics/key-statistics/renewables/#?text=Renewable%20energy%20\(when%20aggregated\)%20is,percentage%20points%20to%20reach%2036.8%25](https://www.seai.ie/data-and-insights/seai-statistics/key-statistics/renewables/#?text=Renewable%20energy%20(when%20aggregated)%20is,percentage%20points%20to%20reach%2036.8%25). [Accessed April 2024]

⁸⁶ SEAI (2022). National Energy Balance [National Energy Balance | Key Publications | SEAI](#).

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There has been significant progress made over the last four years in relation to the transition to renewable energies, with 2022 being a record year for the connection of electricity to the grid. In 2022, renewable energies accounted for 38.6%, an increase from 35.0% in 2021 and an increase from 7% in 2005. In absolute terms the electricity generated from renewable electricity increased from 1.8 TWh to 12.6 TWh in 2021. The EPA states that decreased emissions in 2022 compared to 2021 were observed in the largest sectors except for transport, waste and commercial services which instead showed increases in emissions⁸⁷.

The deployment of renewable energy has enabled emissions reductions during a period of increased demand, with electricity accounting for just 14.4% of Ireland's overall greenhouse gas (GHG) emissions in 2022. In 2022, total national GHG emissions fell by just 1.9% compared to 2021, with increased renewable energies being a major contributor. The estimated volume of CO₂ avoided using renewable energy reached a peak in 2020 before decreasing slightly to 6.2 Mt CO₂eq. Since 2018 national electricity emissions per capita have reduced to around the EU average, further reflecting the national use of renewable electricity. There was an increase in natural gas use by 12.6% in 2021, following an 8.9% decrease the previous year, as gas-fired plants were offline more often in 2021.

Furthermore, 1,836 MW of renewable generation was successful in the Renewable Electricity Support Scheme (RESS) 2 auction, representing a nearly 20% increase on Ireland's current renewable electricity generation capacity. However, KPMG reports⁸⁷ that the most recent RESS 3 auction has not delivered on the generation capacity expected by industry, where contracts were awarded to three wind farms with a combined capacity of just 148 MW, and just under 500 MW of solar power, for a combined annual generation capacity of 934 GWh. This represents a shortfall on the expected 2,000-3,500 GWh required to meet the 80% renewable electricity target for 2030.

The Climate Action Plan 2024 sets out the key targets for electricity; see **Table 5-13**. Measures include Increasing renewable generation to 80% by 2030 through continued expansion of onshore renewables, developing offshore renewable generation, and delivering additional grid infrastructure. In order to achieve further emissions reductions between now and 2030, there will need to be an acceleration and increase in the deployment of renewable energy to replace fossil fuels.

Table 5-13: Key Targets for Electricity set out in the Climate Action Plan 2024 (Source: DECC, 2024)

Target	2025	2030
Renewable Electricity Share	50%	80%
Onshore Wind	6 GW	9 GW
Solar	Up to 5 GW	8 GW
Offshore Wind	-	At least 5 GW
New Flexible Gas Plant	-	At least 2 GW
Demand Side Flexibility	15-20%	20-30%

RED II introduced a binding EU-wide target for overall RES of 32% by 2030, and it requires Member States to set their national contributions to the EU-wide target. The recast Renewable Energy Directive [RED II] (2018/2001/EU) raises the 2030 binding target for RES in the EU's FEC to 42.5%, with an indicative top-up of 2.5%. The RED III also strengthens the sectoral provisions to achieve this new target. Specifically, the basis of the target for RES-H will change from an indicative nature to a binding nature and this requirement will target progress towards the built environment sectoral emissions ceilings (SEC).

5.3.7.3 Grid Capacity and Interconnectors

The transmission system consists of high voltage lines and cables that transmit electricity around Ireland and Northern Ireland. The network in Ireland operates at 110 kilovolts (kV), 220 kV and 400 kV and in Northern Ireland at 110 kV and 275 kV. There are three connections between the two networks, one at 275 kV and two at 110 kV. A 400 kV interconnector between ROI and NI, the North-South Interconnector, is being planned and is expected to be complete by 2025 (EirGrid, 2023)⁸⁸.

⁸⁷ KPMG Update on RESS 3 Auction. Available at: <https://kpmg.com/ie/en/home/insights/2023/09/renewable-electricity-support-scheme-auction-esg.html> [Accessed June 2024]

⁸⁸ EirGrid (2023). North south 400 kV Interconnection Development [The Project \(eirgridgroup.com\)](https://www.eirgridgroup.com).

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The Moyle interconnector between Northern Ireland and Scotland became operational in 2002 and has a 500 MW capacity. The all-Ireland Single Electricity Market (I-SEM) was then introduced in 2007, allowing for imports and exports of electricity between the island of Ireland and Great Britain, and more recently between the I-SEM and continental Europe.

A 400 kV interconnector between ROI and NI, the North-South Interconnector, is being planned and is expected to be complete by 2025 (EirGrid, 2023)⁸⁸.

The East West interconnector (EWIC) between Ireland and Wales has a capacity of 500 MW. The EWIC connects Rush North Beach converter station in north County Dublin to the Shotton converter station in north Wales⁸⁹.

EirGrid and its French equivalent, Réseau de Transport d'Electricité (RTE), are currently developing the Celtic Interconnector between Ireland and France, which would enable the exchange of 700 MW of electricity between the two countries and comprises an important element of increasing the security of the island's electricity supply. As of April 2024, construction works have commenced⁹⁰.

Greenlink is a proposed 500 MW capacity interconnector to link the Great Island substation in County Wexford with Pembroke substation in Wales. Project construction has commenced, and commissioning is planned for 2024⁹¹.

MaresConnect is a proposed 750 MW interconnector between Ireland and Wales and is currently in the early stages of development; the expected operational date is by 2030⁹².

Grid System Needs Assessment to 2030

A system needs assessment was carried out by EirGrid to determine the level of development required for the transmission grid in Ireland for 2030 (EirGrid, 2018)⁹³. Demand, generation and interconnection are the three main influencing factors. The main driver in Dublin, the Mid-East and the Border region was identified as large demand growth, mainly from data centres. Renewable technology, particularly onshore wind from outside the area and offshore from the Irish Sea, will also create a need for grid development. The high-voltage circuits in the areas are already experiencing shortfalls and in all scenarios for 2030 the need for development is very high.

The West of Ireland is influenced most by the integration of renewable technology, where onshore wind generation exceeds demand and is exported. The need for grid development for 2030 is high in all scenarios. A similar situation can be seen in the North-West Border region where there is a moderate need for development. The Midland area experiences high levels of West-to-East power transfer and is expected to also need moderate development by 2030 to facilitate this.

The South-West and South-East are areas of high demand and conventional generation, while also having high levels of power transfer through the regions. It is expected that there will be a moderate-to-high need for grid development to support onshore and offshore wind and a potential interconnection. Solar PV, particularly in the South-East, is also expected to add to this need.

Grid opportunities to 2030

A generation opportunity analysis has been carried out by EirGrid on the network in Ireland and by SONI for Northern Ireland (EirGrid and SONI, 2021)⁹⁴. The aim of the analysis is to determine the opportunities for additional generation at specific areas of the network in 2030. The 220 kV, 275 kV and 400 kV networks were considered together, with specific stations selected. The stations were then tested on their capability to support additional generation up to a maximum of 600 MW; refer to **Figure 5.30**. A maximum of 200 MW additional generation was considered for the analysis of the selected 110 kV stations; refer to **Figure 5.31**.

The values at each location indicate the capacity of the opportunity for new generation associated with the selected 220 kV, 275 kV or 400 kV station (**Figure 5.30**). EirGrid and SONI (2022) report states that in

⁸⁸ EirGrid (nd). EirGrid EWIC Trading Brochure 'The East West Interconnector' <http://www.eirgridgroup.com/site-files/library/EirGrid/EWICTradingBrochure.pdf>

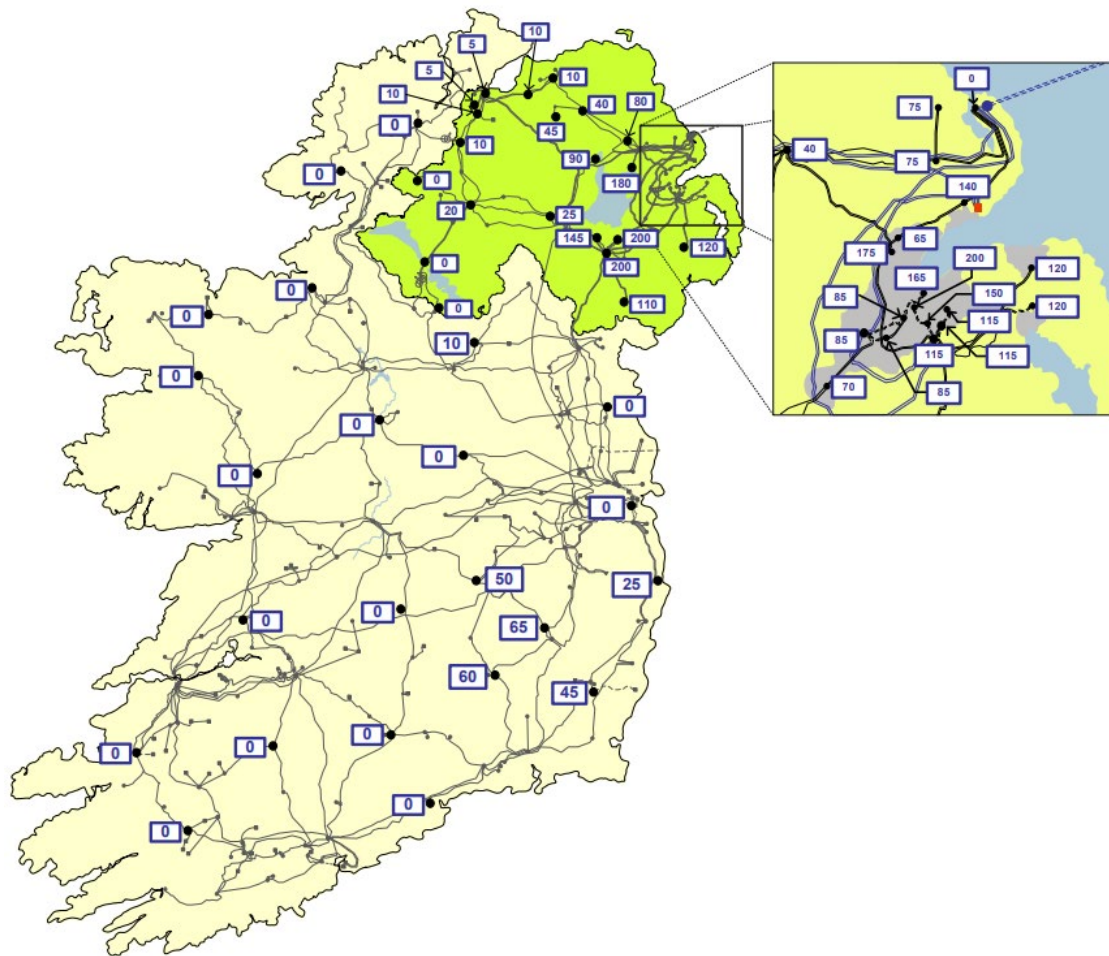
⁹⁰ Celtic Interconnector project website. <https://www.eirgrid.ie/celticinterconnector#project-updates>

⁹¹ Greenlink project website. <https://www.greenlink.ie/>

⁹² MaresConnect Ltd. Project website. <https://maresconnect.ie/>

⁹³ EirGrid (2018). Tomorrow's Energy Scenarios 2017: System Needs Assessment [TES-2017-System-Needs-Assessment-Final.pdf](https://www.eirgridgroup.com/tes-2017-system-needs-assessment-final.pdf) (eirgridgroup.com).

⁹⁴ EirGrid & SONI (October 2022). All-Island Ten Year Transmission Forecast Statement 2021. Available at: <https://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Ten-Year-Transmission-Forecast-Statement-TYTFS-2021.pdf>



Source: Figure 7-3, EirGrid & SONI (October 2022) All-Island Ten Year Transmission Forecast Statement 2021. Available at: <https://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Ten-Year-Transmission-Forecast-Statement-TYTFS-2021.pdf>

Figure 5.31: Generation Opportunity at 100 kV Stations in 2030

Data Centres

Data centres are facilities that house the computing and networking equipment of organisations. They are used to collect, store, process and distribute large amounts of data and are vital for backup and recovery purposes.

There are currently 82 operational data centres in Ireland, with 1,261 MW of capacity (Bitpower, 2023)⁹⁵. Most of the facilities are currently located in the Dublin metropolitan area and EirGrid expects this trend to continue as extra data centre load is introduced. The dominating classification in Ireland are 'hyperscale' data centres i.e., those built by large corporations that require their own data facilities. These include Microsoft, Amazon, Google and Facebook, all of which have active expansion plans. Colocation and colocation wholesale data centres are also expanding in Ireland. Colocation wholesale facilities lease space to hyperscale data centres when required and it can be beneficial to have them located close together. As a result, clusters of a mix of data centres are forming in the Dublin region, which combined with the off-island fibre networks available, makes Dublin a focal point for expansion in the future. Cork has been identified as a potential area for data centre development as plans are in place for the required fibre connectivity. Limerick and Galway are also expected to experience growth in data centre development.

The number of large-scale data centres in Ireland is expected to increase, particularly in the Dublin metropolitan area; this development will impact on demand, available grid capacity and the rate of uptake of renewable technologies. Data centres are classified by EirGrid as key large energy users as they can require the same amount of energy as a small town. Data centres are expected to be a key driver for electricity

⁹⁵ Bitpower (2023). Tracking Ireland's Data Hosting Industry [Digital Dashboard \(bitpower.ie\)](https://bitpower.ie/).

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demand over the coming years. In Ireland, there is approximately 1,700 MVA of demand capacity contracted to data centres (EirGrid, 2023)⁹⁶.

In late 2021, the Commission for the Regulations of Utilities (CRU) issued a direction related to the processing of data centre connections to the grid in Ireland to EirGrid, and ESB as the Distribution System Operator (DSO). As per the directive from the CRU in November 2021, data centres projects that do not currently have connection agreements will be assessed on new criteria. This will be dependent on the ability of the data centres to bring dispatchable generation (and/or storage) with a capacity equivalent to or greater than their demand (EirGrid, 2022).

Data centres are the largest source of energy demand growth in Ireland, with the CSO reporting in 2022 that 18% of Ireland's metered electricity was consumed by data centres, the same level of metered consumption as all urban homes in 2022⁹⁷. The International Energy Agency (IEA) reports⁹⁸ that Ireland's current stock of data centres is expected to grow by 65% in the coming years, with 14 data centres under construction and 40 approved in planning. At the current pace of growth, the IEA projects that Ireland's electricity demand will grow faster than all other countries in Europe and that almost one-third of electricity demand in Ireland could come from data centres by 2026. The growth in data centres globally is being driven by growth in the areas of cryptocurrency and artificial intelligence services, which are highly energy-intensive.

Gas Network

Gas Networks Ireland is responsible for building, developing and operating the national gas infrastructure, and maintaining over 14,664 km of gas pipelines and two subsea interconnectors (Gas Networks Ireland, 2022)⁹⁹. The Gas Networks transmissions networks includes onshore Scotland, the interconnectors and the Republic of Ireland network. The interconnector system connects to Great Britain's National Transmission System (NTS) at Moffat in Scotland and supplies gas to the Northern Ireland market from Twynholm in Scotland and the Isle of Man market.

Gas Network Ireland's Summer Outlook 2023 report recorded an increase in gas demand by 8.2% for summer 2022 against the same period in 2021. This was driven by an increase in gas consumption for power generation 18%, despite decreases in demand for the residential (-14.5%) and commercial (-6.7%) sectors (GNI, 2023)¹⁰⁰. For summer 2022, indigenous gas supplies accounted for 26% of ROI gas demand, with the remaining being from imports from Great Britain through the Moffat Entry Point. Daily summer demand is projected to exceed the indigenous supply capacity, with most of the demand to be met by imports from the Moffat Entry Point. It is expected that Corrib will operate at its forecasted capacity and be the dominant indigenous gas source.

Power generation represented 50% of gas demands in Ireland, at 18,747 GWh. This is followed by Daily Metred (DM) Industrial and Commercial (I&C) gas at 5,775 GWh and Non-Daily Metred (NDM) at 2,904 GWh (Figure 5.32). There was a reduction in I&C and NDM demand in summer 2022 compared with 2021 as a result of high energy prices due to the energy crisis and pressures from economic inflation.

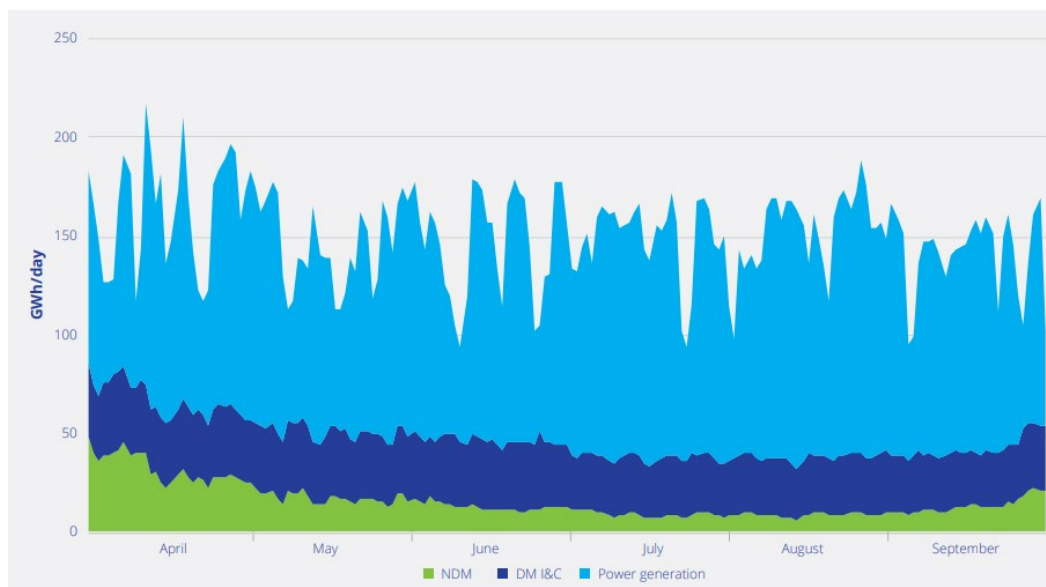
⁹⁶ EirGrid (October 2022). Ireland's Capacity Outlook 2022-2023 *[EirGrid SONI Ireland Capacity Outlook 2022-2031.pdf \(eirgridgroup.com\)](https://www.eirgridgroup.com)

⁹⁷ CSO (June 2023) Data Centres Metered Electricity Consumption 2022. Available at: <https://www.cso.ie/en/releasesandpublications/ep/p-dcmec/datacentresmeteredelectricityconsumption2022/>

⁹⁸ IEA (2024). Electricity 2024 – Analysis and forecast to 2026. Available at: <https://www.iea.org/reports/electricity-2024>

⁹⁹ GNI (2022). Gas Forecast Statement 2022 [GNI-2022-Gas-Forecast-Statement.pdf \(gasnetworks.ie\)](https://www.gasnetworks.ie/GNI-2022-Gas-Forecast-Statement.pdf)

¹⁰⁰ GNI (2023). Summer Outlook 2023 [Summer-Outlook-2023.pdf \(gasnetworks.ie\)](https://www.gasnetworks.ie/Summer-Outlook-2023.pdf)



Source: Figure 3, GNI (2023) Summer Outlook 2023. Available at: <https://www.gasnetworks.ie/docs/corporate/gas-regulation/Summer-Outlook-2023.pdf>

Figure 5.32: Gas Networks Ireland Summer Outlook 2023 – Actual Gas Demand

Gas Networks Ireland has developed three gas demand scenarios for the period 2021/22 to 2030/31, namely as Low, Best Estimate and High demand. In the Best Estimate scenario, annual ROI gas demand is expected to fall by 12% between 2021/22 and 2030/31. Similarly, in the Low demand scenario, a decrease of 22% in ROI gas demand is predicted over the same period, while a slight increase in annual gas demand of 3% is projected in the High demand scenario. The decreases for the Best Estimate and Low demand scenario are driven by an anticipated decline in gas demand for the Power Generation and Residential Sectors. The decline in Power Generation is related to increased electrical interconnection and targets for offshore wind and solar generation in Ireland coupled with revised electricity system constraints designed to achieve a 70% renewable energy share in electricity generation by 2030. The slight increase in demand under the High demand scenario is driven by the assumption that the 70% RES-E target will not be met by 2030.

At the time the report was published, taking account of the targets under the Climate Action Plan 2021, there is projected to be negative growth in the Residential Sector under all scenarios. This projected trend is contributed to expected reduced new connections, coupled with an anticipated increase in disconnection rates in this sector as a result of gas boilers coming towards the end of their useful life, being replaced with heat pumps (GNI, 2022)⁹⁹.

5.3.7.4 Water Supplies and Wastewater Treatment

Water Supplies

The GSI borehole database indicates that there are over 33,200 groundwater wells and springs at a national level (those with the highest positional accuracy). Of these, over 850 are at the appropriate abstraction yield to provide for potable water supply (i.e., they are classed as ‘Excellent’ or ‘High Spring’). Across Ireland, there are 2,929 registered abstractions as of 2023, which are taken from a mix of groundwater, lake and river sources and are used for both public and private water supplies.¹⁰¹ There are also approximately 431 water treatment works nationwide.

The EPA Climate Status Report for Ireland 2020 (EPA, 2021) states that in 2018, approx. 82% (1,655 million m³) was abstracted from surface water, with the remaining 18% (375 million m³) coming from groundwater sources. More than half of the surface water abstracted was used for public water supply. Just over a quarter of the surface water abstracted was used by the electricity generation sector for cooling, with almost none abstracted from groundwater sources. Most of the water used in manufacturing sector was abstracted from

¹⁰¹ EPA Register of Abstractions. Available at: <https://www.epa.ie/publications/monitoring--assessment/freshwater--marine/epa-water-abstraction-register.php> [Accessed June 2024]

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groundwater, which is also the primary source of water used in agriculture (noting that while the overall proportion used in agriculture was small, this may be underestimated). Abstractions are reported by the EPA as being a significant pressure on 9 lake water bodies and 7 river water bodies.

Security of supply is an ongoing issue Ireland, with many areas reliant on a single supply. The water supply for the Greater Dublin Area for instance, frequently has just 2% headroom and across other towns and cities, does not meet international standards for spare capacity. This has implications for security and sustainability of supplies in light of the population growth projections set out in the NPF and three RSES's, which may also have implications for certain sectors requiring large amounts of water.

The EPA Drinking Water Quality in Public Supplies Report published in 2022, reported that over 99.7% of public water supplies complied with bacterial and chemical limits but 481,000 people were served by “at-risk” supplies on the EPA’s Remedial Action List (RAL), up from 374,000 people in 2021. It was further reported that persistent trihalomethane (a byproduct of water treatment processes) failures were detected at supplies serving 235,000 people, doubling the population affected since 2021. The latest version of the RAL was published in Q4 2023¹⁰²; 57 drinking water supplies across the country require some form of remedial action/treatment improvement related to e.g., inadequate disinfection, inadequate treatment for *Cryptosporidium*, elevated trihalomethanes, elevated pesticides, turbidity etc. The counties with a water supply or supplies currently on the RAL are: Carlow, Clare, Cork, Donegal, Galway, Kerry, Kildare, Kilkenny, Limerick, Longford, Louth, Mayo, Meath, Monaghan, Offaly, Roscommon, Tipperary, Waterford, Wexford and Wicklow.

The GSI has now completed Groundwater Protection Schemes (which includes the delineation of source protection zones for public water supplies) in collaboration with local authorities, and there is now national coverage. The EPA also delineates additional source protection zones not covered by the GSI programme. On foot of the 2nd Cycle River Basin Management Plan, a Drinking Water Safety Plan approach was adopted with technical work underway to complete risk assessments of drinking water sources.

The EPA Climate Status Report for Ireland 2020 (EPA, 2021) states that groundwater volumes and levels are influenced by not only rainfall and dry periods but mainly human use. Globally, abstraction, particularly in arid and semi-arid zones, is leading to rapid depletion rates of groundwater, noting that existing risks and pressures to groundwater quality and quantity may be exacerbated by changing climatic conditions which could lead to further depletion, pollution and saltwater intrusion. However, in Ireland, the EPA reports that groundwater 91% of groundwater bodies are in good chemical status and nearly all are in good quantitative status⁵¹.

Uisce Éireann, speaking at the National Infrastructure Summit in Ireland in May 2024, highlighted that 1.75 million people living in the Greater Dublin Area are relying on a water supply developed in the 1940s for a capacity of 500,0000. However new water supplies at scale for the Eastern-Midlands region in particular have not been developed. This highlights critical issues with water supplies and the demands for new connections in the context of planning for a growing population.

Wastewater Treatment

There are 545 wastewater treatment works nationwide licensed by the EPA (PE > 500), the majority of which discharge to rivers; however, a few discharge to lakes, transitional and coastal waters. Of these, 281 wastewater works have tertiary treatment for either nitrogen or phosphorus removal, or both. In addition to these wastewater treatment plants there are also 566 wastewater works which are classed under Certificates of Authorisation licensed by local authorities (PE < 500).

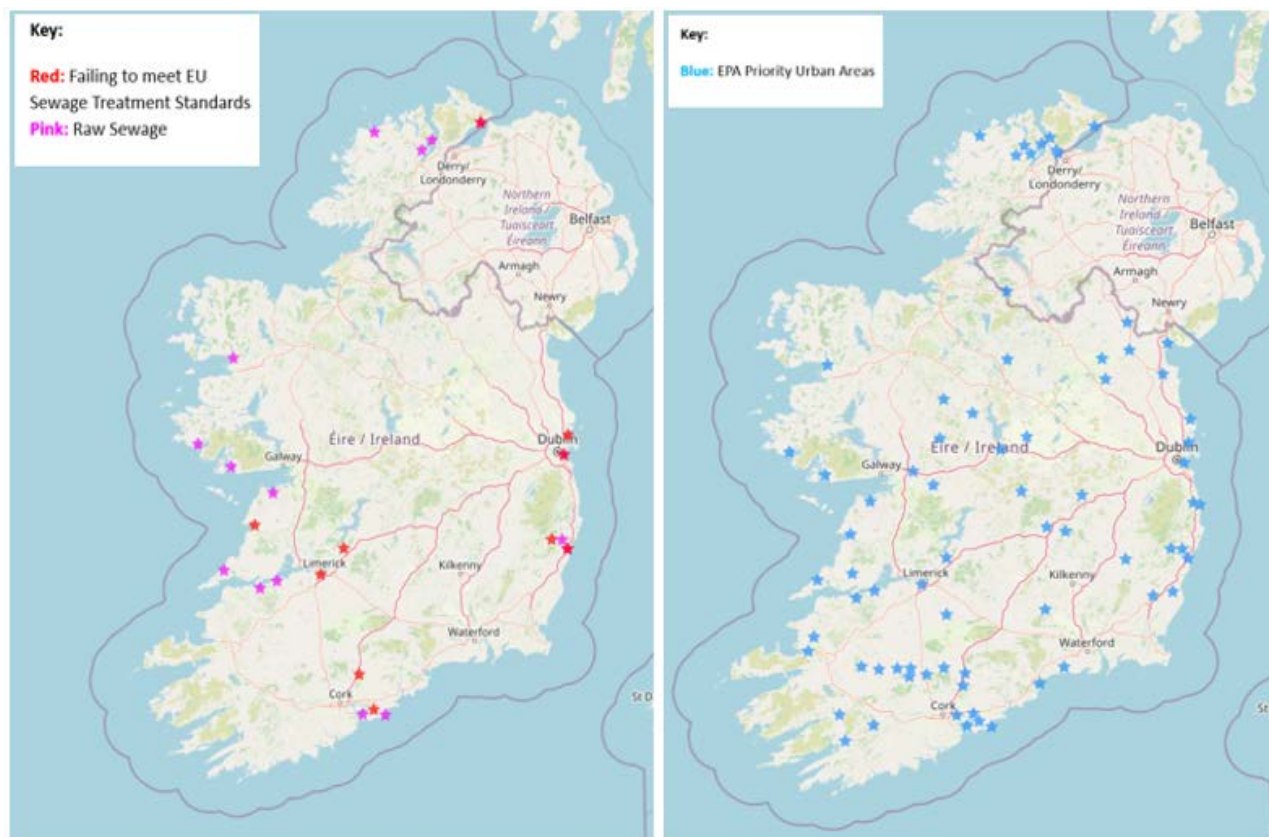
The 2019 Significant Water Management Issues Report (DHLGH, 2019)¹⁰³, that was further consulted upon in 2020, states that progress has been made in reducing phosphorus and nitrogen emissions from wastewater treatment plants, as well as industrial discharges (large point sources). Uisce Éireann is continuing its investment in wastewater projects, programmes and asset maintenance in order to reduce per capita nutrient emissions from wastewater and to improve water quality particularly at plants which have been identified as significant pressures on water bodies. Uisce Éireann are currently completing drainage area plans for 44 urban areas; this will help prioritise areas where leaking sewers and misconnections are an issue and where focused efforts might need to be targeted.

¹⁰² EPA (2023) Drinking Water Supply Remedial Action List Q4 2023. Available at: <https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/epa-drinking-water-remedial-action-list-q4-of-2023.php>

¹⁰³ DHLGH (2019). [Public Consultation on the Significant Water Management Issues for the third cycle River Basin Management Plan for Ireland 2022-2027](#)

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The EPA reports however that over half of Ireland's wastewater discharges are not meeting EU standards set to protect the environment; in addition, raw sewage continues to be discharged from 26 towns and villages, with Uisce Éireann committing to eliminating such discharges by 2025 from the majority of these¹⁰⁴. There are also urban areas which have treatment in place, but it is inadequate, and which are classed as Priority Urban Areas; see **Figure 5.33**.



Source: EPA Sewage Treatment Maps [Accessed June 2024]. Available at: <https://gis.epa.ie/EPAMaps/SewageTreatment>

Figure 5.33: Locations with Wastewater Treatment Issues

As shellfish growing areas are located all around and adjacent to the coast, they are sensitive to pressures from outside the aquaculture sector, namely land-based pollution (such as nutrient enrichment from diffuse agricultural run-off) as well as direct discharges, such as septic tanks and to a larger extent discharges from urban wastewater. Uisce Éireann are obliged to assess if such discharges impact on shellfish waters, with the EPA then advising on where disinfection or other improvements are required.

¹⁰⁴ EPA Press Release (October 2023). Available at: <https://www.epa.ie/news-releases/news-releases-2023/uisce-eireann-must-use-its-new-investment-plan-to-end-pollution-of-our-rivers-and-coastal-waters-from-waste-water.php#:~:text=Over%20half%20of%20Ireland's%20waste,and%20villages%20with%20no%20treatment.>

5.3.7.5 Circular Economy and Waste Management

Ireland is currently on track to achieve many of the current EU waste targets which reflects positively on the progress made in the sector over the last 20 years. However, performance targets are increasing, and next generation targets will pose a significant challenge. In terms of the State's circularity rate i.e., the ability to keep materials in use and avoid continued extraction of primary raw materials, Ireland is currently performing poorly. The EPA reports in the latest National Waste Statistics Summary Report for 2020 (EPA, 2022)¹⁰⁵ that Ireland's circular material use rate was 1.8% as of 2020, compared to an EU average of 12.8%.

The EPA report highlights that urgent action is required to reverse the rise in waste generation, significantly improve recycling rates and increase Ireland's self-sufficiency in treating waste. The EPA also state the requirement for Ireland to transform current business models into circular ones that promote waste reduction, reuse and recycling, as waste generation in Ireland continues to be closely linked with economic activity indicating limited progress towards a circular economy.

The draft Plan states that Ireland's material consumption is well above the EU average, indicating that there is scope for savings in greenhouse gas (GHG) emissions through maximising the efficiency of material usage. The EPA reports that municipal waste generation increased by 4% to 3.2 million tonnes; of this, household waste accounted for 1.8 million tonnes. However, the amounts of packaging waste, construction and demolition waste and hazardous waste all decreased. The trend towards incineration has continued, with 43% of municipal waste sent for incineration and 16% of municipal waste sent to landfill. A large majority of plastic waste (71%) was sent for incineration, indicating that recycling rates for plastic waste are not on a positive trend. The amount of municipal biowaste sent for treatment by composting or anaerobic digestion increased slightly to 320,000 tonnes; however, 27% of waste sent for biological treatment took place at facilities in Northern Ireland. Ireland still has a heavy reliance on export for waste treatment, with 39% of municipal and 55% of hazardous waste being exported for final treatment as of 2020.

The EPA also reports that while Ireland currently meets all recycling and recovery targets, new targets will mean significant improvements in recycling rates will be needed to meet the 55% target rate by 2030. Overall, the EPA conclude that urgent action is needed to: reverse the rise in waste generation; significantly improve recycling rates; and increase Ireland's self-sufficiency in treating its waste.

The EPA estimate that Ireland generated approximately 753,000 tonnes of food waste in 2021. A significant amount of food waste in Ireland is not currently being segregated for separate collection and ends up in residual and recycling bins. Food waste management has improved with an increase in brown bin collections over the last decade, however, notwithstanding that in rural areas there may be other collection arrangements in place, just 64% of households have a dedicated brown bin. The EU's Circular Economy Action Plan states that an estimated 20% of total food produced is lost or wasted in the EU. Ireland's Food Waste Prevention Roadmap sets out a series of actions to deliver the reductions necessary to meet the target of a 50% reduction in food waste by 2030. The Roadmap further states that an estimated 8-10% of global GHG emissions are associated with food that is not consumed, and that worldwide, more than a quarter of food that is produced is wasted, with the UN's Food and Agriculture Organization reporting that globally, an estimated 60% of all fruits and vegetables produced end up in landfill.¹⁰⁶

In terms of GHG emissions from the waste sector, the draft Plan states that GHG emissions arising from waste are predominantly methane arising from disposal to landfill. The gains in reducing material use, and substituting virgin material with recycled material, would then have benefits that are felt back up the supply chain. Minimising waste generation, and improving segregation, reuse and recycling will lead to fewer emissions associated with waste transport and treatment. Material management, which leads to waste treatment, accounted for 1.4% of Ireland's total GHG emissions in 2021. Waste emissions per head are lower in Ireland compared to the EU average and emissions have fallen since 2005.

5.3.7.6 Communications

The National Broadband Plan (NBP) aims to deliver high-speed broadband services to over 1.1 million people in areas where there is no existing or planned commercial network. The intervention area includes

¹⁰⁵ EPA (2022) National Waste Statistics Summary Report for 2020. Available at: <https://www.epa.ie/publications/monitoring--assessment/waste/national-waste-statistics/national-waste-statistics-summary-report-2020.php>

¹⁰⁶ FAO – Food wastage footprint & Climate Change. Available at: <https://www.fao.org/3/bb144e/bb144e.pdf>

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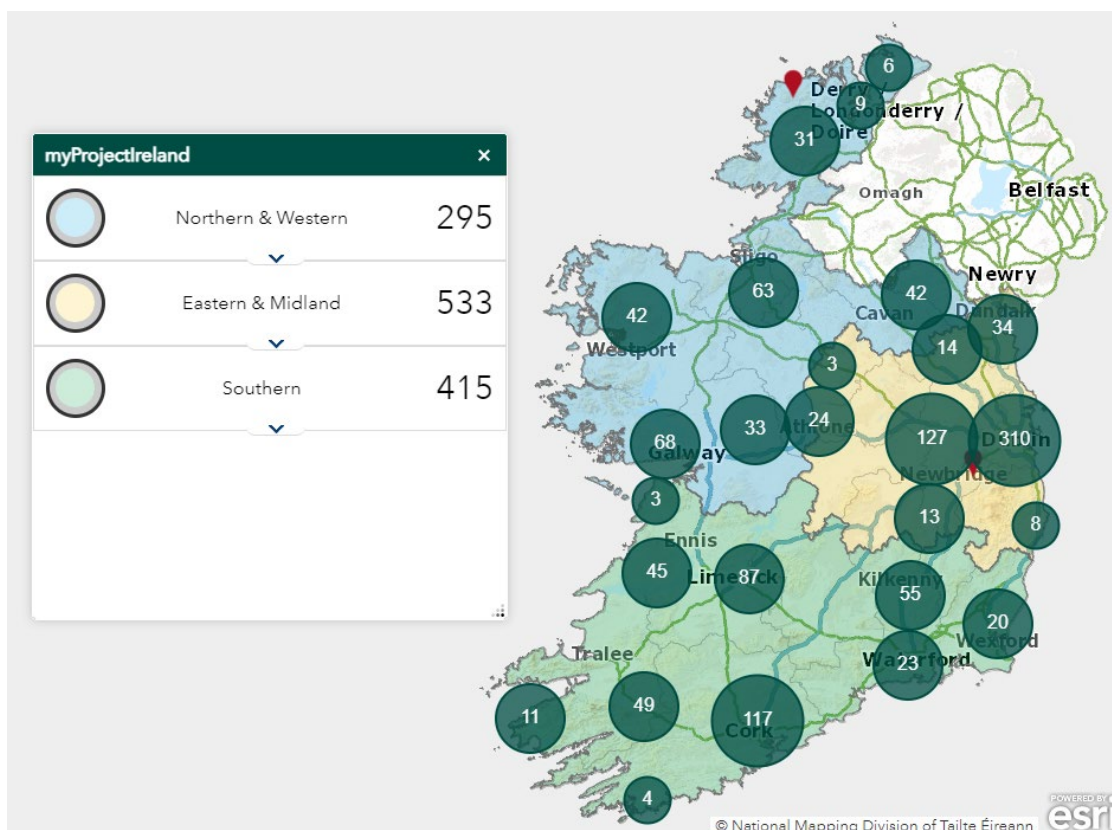
almost 560,000 premises, approximately 100,000 farms and businesses, and 679 schools. The NBP network will offer those premises a high-speed broadband service with a minimum download speed of 500 Mbps from the outset. The NBP aims to ensure that households and businesses in rural parts of Ireland will have a similar level of connectivity as households and businesses in urban areas.

During deployment of the network, reuse of existing infrastructure and materials (Irish., existing poles and underground ducts) is to be maximised. The aim is to increase resource efficiency and reduce emissions associated with fabrication, transport, and the installation of new physical network materials. The high-speed broadband network will deliver a range of environmental benefits. For each new remote worker, an estimated average net saving of up to 10 kWh per day is calculated will be achieved, which has the benefits of reducing commuter transport energy use and therefore associated transport emissions.

An update on the delivery of the National Broadband Plan from December 2021 states that at present 30 Retail Service Providers (RSP) are actively selling on the National Broadband Plan Network with almost 35,000 premises across 14 Counties (Carlow, Cavan, Clare, Cork, Galway, Kerry, Kildare, Limerick, Louth, Monaghan, Roscommon, Tipperary, Wexford, Wicklow) now able to order and pre-order high-speed connections. However, the roll-out of broadband has been met with delays, including from the COVID pandemic, and therefore original targets are behind schedule.

5.3.7.7 Infrastructure – National Strategic Projects

Project Ireland 2040 sets out the Government's long-term strategy for planning and development, of which the NPF is the planning framework and sets out strategic policy direction, accompanied by €165 billion in investment over a ten year plan, the National Development Plan 2021-2030. The DHLGH has published an interactive map viewer to accompany the Project Ireland reports which gives the locations of approximately 1,100 projects at present, indicating the types of capital developments that are underway; see **Figure 5.34**.



Source: DHLGH, interactive map [Accessed February 2024]. Available at: <https://geohive.maps.arcgis.com/apps/webappviewer/index.html?id=26b6e93dcd1044ff8fa2bd1a772a6080>

Figure 5.34: MyProjectIreland – Project Map Viewer

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In October 2023, the Minister for Public Expenditure National Development Plan Delivery and Reform, published the Project Ireland 2040 Annual Report for 2022¹⁰⁷. It highlights the delivery of publicly-funded capital projects throughout the country over the course of 2021. Three regional reports accompany the national report which outline the public investments made across each of the three Regional Assembly Areas. **Figure 5.35** illustrates some of the key facts and projects delivered nationally.

¹⁰⁷ DHLGH (2023) Project Ireland 2040 – Annual Report 2022. Available at: <https://www.gov.ie/en/collection/47215-project-ireland-2040-annual-reports/>

Key Facts and Projects 2022 Update – Project Ireland 2040



Rialtas
na hÉireann
Government
of Ireland

Tionscadal Éireann
Project Ireland
2040



Source: DHLGH (2023) Project Ireland 2040 – Annual Report 2022.

Available at: <https://www.gov.ie/en/collection/47215-project-ireland-2040-annual-reports/>

Figure 5.35: Key Facts and Projects 2022 Update – Project Ireland 2040

5.3.7.8 Existing Environmental Pressures/ Problems: Material Assets

The National Development Plan is delivering many projects across Ireland, across areas such as transport, rural regeneration, education, flood relief schemes, healthcare, employment and residential provisions. However as noted previously, the DHLGH Housing Delivery Tracker tool indicates that the majority of cities and large settlements are not reaching the housing targets set out in Development Plans, with the exception of towns in the extended hinterlands of Cork and Dublin.

Increased development including residential, agricultural and industrial expansion continues to put pressure on existing water sources with regards to quantity as well as on the treatment facilities used to treat both drinking water and wastewater. This is particularly true given the increased loadings to wastewater treatment facilities as the population continues to grow. Security of water supply is an ongoing issue, with many areas reliant on a single supply. The water supply for the Greater Dublin Area for instance, frequently has just 2% headroom and across other towns and cities, does not meet international standards for spare capacity. The EPA reports that 91% of groundwater bodies are in good chemical status and nearly all are in good quantitative status. The impact of municipal wastewater discharges remains a significant pressure impacting on surface water bodies, in particular from inputs of nitrogen and phosphorus causing eutrophication. Inadequate treatment in terms of infrastructure (or lack thereof), insufficient treatment capacity, or the level of treatment carried out, all contribute to pollution and put pressure on both sources of abstraction, and on the receiving water environment.

The CSO projects that the population of Ireland will grow significantly under six projection scenarios to 2051 - between 5.6 million and 6.7 million people (CSO, 2018)¹². This will place pressure on material assets in terms of delivering sufficient services and infrastructure, as well as increased demands on energy for heat and electricity, as well as high quality broadband services. In addition, the proliferation of large energy users, particularly in the computing/IT sector, will also place increasing pressure on the grid and energy demands.

While the state has a high level of road transport infrastructure, this has led to the over-reliance on road traffic as the predominant mode of transport for both passengers and freight. As a consequence, emissions of greenhouse gases and acidifying gases from the road transport sector hold a significant share of national emissions and show increasing trends into the future. There is a strong need for measures to encourage modal shift away from private cars and encourage more informed decision making and consumer choices in relation to distance travelled and the vehicles/ fuels employed by citizens. The Society of the Irish Motor Industry (SIMI) state that 18% of new vehicles registered by September 2023 were electric vehicles, and the Climate Action Plan sets an ambitious target of 845,000 private electric vehicles (EVs) and 95,000 commercial EVs by 2030. However, there is a risk that while more EVs will be on Irish roads, the number of new vehicles in total would continue grow in tandem with population growth. This would continue the historical and present pattern of an over-reliance on and lock-in to private vehicle use, rather than a shift in the proposition of modal choice towards public transport and active travel.

While significant progress has been made in recent years to increase the proportion of renewable energy generated, Ireland continues to remain heavily reliant on fossil fuels; the SEAI report, Energy in Ireland (2023) states that Ireland imported 81.6% of its total primary energy requirement, and overall, 85.8% of Ireland's primary energy requirement came from fossil fuels. Ireland's total energy demand was also 4.7% higher in 2022 than in 2021. Continued over-reliance on fossil fuels and energy import dependency has significant negative impacts for human health and the environment. According to the Climate Action Plan 2024, 42% of all electricity generated in 2020 came from renewable sources; 2022 was a record year for the connection of electricity to the grid (accounting for 38.6%, an increase from 35% in 2021, and an increase from 7% in 2005). The Renewable Electricity Support Scheme (RESS) 2 auction saw a nearly 20% increase on Ireland's current renewable electricity generation capacity. However, the most recent RESS 3 auction has not delivered on the expected generation capacity, with a combined capacity of just 148 MW, and just under 500 MW of solar power, for a combined annual generation capacity of 934 GWh; this represents a significant shortfall on the expected 2,000-3,500 GWh required to meet the 80% renewable electricity target for 2030.

In order to secure the high levels of renewable energy needed over the coming decades, a balanced portfolio of new capacity is required such as the need for new cleaner gas-fired generation plant for when solar and wind generation is low (SEAI, 2023)⁸⁴. EirGrid's report, Ireland Capacity Outlook 2022-2031(October 2022)⁹⁶ reports that the following recent developments will affect the security of electricity supply over the coming years in Ireland:

- Availability: There is poor generation performance, and some generation capacity is due to close in September 2023.

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- Failure of new generation to materialise: Previously awarded capacity has been withdrawn.
- Run Hour Restrictions: Two new Open Cycle Gas Turbines (OCGT) that came through previous capacity auctions may have limitations imposed on their run hours due to restrictions in their planning application or environmental permits.
- Demand: Demand levels around 140 MW higher by 2030 than previous forecasts.

The planned phasing out of fossil fuels and deployment of renewable energy resources will require large-scale public and private investment in energy infrastructure, energy efficiency and innovative management systems. Enabling better energy efficiency in buildings would help to reduce the pressure on energy resources. The deployment of indigenous renewables will also support Ireland's energy security in the long-term.

The EPA State of the Environment report (2020) states that landfilling in Ireland is currently at an all-time low and Ireland produces less waste per capita compared to the European average. However, in terms of the State's circularity rate (i.e., the ability to keep materials in use and avoid continued extraction of primary raw materials) Ireland is currently performing poorly and the EPA reports that as of 2020, Ireland's circular material use rate was 1.8% as of 2020, compared to an EU average of 12.8%. CSO data indicates that some 500,000 homes do not implement waste prevention, and around 51,000 homes do not participate in legal waste management practices. The objectives under the draft first revision to the NPF to utilise infill and brownfield sites in urban areas to accommodate housing means there is potential to excavate and generate significant levels of contaminated materials, particularly in areas with recent or historical industrial uses. Ireland has no hazardous waste landfill, and limited capacity in other available infrastructure. Just one landfill has the ability to take and process some contaminated land. As of 2020, 39% of municipal and 55% of hazardous waste is exported for final treatment. With continued population growth and the need for adequate housing provision, this will put pressure on local authorities and necessitates more resourcing at local authority level as well as better waste management and mainstreaming of circularity measures, as well as access to services.

In this context, the key issues and challenges impacting Material Assets of relevance to the draft first revision to the NPF relate to:

- Planning and development potential e.g. opportunities to provide options for modal shifts.
- Opportunities for co-location of infrastructure/ reallocation of existing built environment space to facilitate modal shift.
- Competition for space resulting from development/ measures implemented across multiple sectors of society.
- Potential infrastructure deficits e.g. grid capacity issues to facilitate ambitious level of renewable energy source connections and projected increased demands for decarbonised electricity from all sectors; lack of headroom in the water supply system and issues with providing new water connections to service new housing construction and a growing population.
- Trends in numbers of new cars and increasing kilometres travelled by all goods vehicles on national roads, and a rebound post-COVID restrictions, though at lower levels, of all kilometres travelled.
- Trends in energy-related emissions increasing in 2021, despite commitments to emissions reductions and sectoral ceiling budgets.
- Changing environmental and climatic conditions may affect the resiliency and/or dependability of infrastructure e.g. water services and abstractions/maintaining sufficient headroom, intermittency of renewable generation sources.
- Poor circularity rate in Ireland compared to other EU countries.
- Ireland has limited hazardous waste treatment capacity and continues to export around half of its hazardous waste to other countries. Infill development/regeneration on brownfield/previous industrial sites has the potential to generate significant quantities of hazardous waste and/or contaminated land/soil.
- In-combination impacts on biodiversity, water, soils, landscape, cultural heritage, soils etc. from competing sectors.

5.3.8 Cultural Heritage

The main issue for archaeological, architectural and cultural heritage associated with the implementation of the draft NPF is the resulting potential for both direct and indirect impacts on archaeological and architectural features and their settings as a result of siting of new infrastructure (e.g., for waste water treatment) and land use change.

The baseline relevant to the draft first revision to the NPF in relation to Cultural Heritage is as follows:

- Protected sites and features – national monuments, National Inventory of Architectural Heritage, Architectural conservation Areas, Protected structures.
- Human values - historical, cultural, religious, and other understandings and interactions with landform and land cover.

In Ireland, the National Monuments Acts 1930 (as amended) was replaced by the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 (Act 26 of 2023) in October 2023. The Act gives effect to the EIA Directive and the Habitats Directive in relation to the carrying out of works at, on, in, under, to, or within the immediate surroundings of monuments.

5.3.8.1 Overview of Cultural Heritage Protection in Ireland

The main records of heritage sites and features include those listed as follows:

Record of Monuments and Places (RMP)

The RMP is the statutory list of all known archaeological monuments in Ireland as compiled by the Archaeological Survey of Ireland, part of the Department of Housing, Local Government and Heritage.

National Inventory of Architectural Heritage (NIAH)

The NIAH identifies, records and evaluates 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 for the Environment, Heritage and Local Government to the planning authorities for the inclusion of particular structures in their Record of Protected Structures.

Record of Protected Structures (RPS)

The NIAH surveys provide the basis for the recommendations of the Minister for Housing, Local Government and Heritage [previously the Minister for Environment, Heritage and Local Government] to the planning authorities for the inclusion of particular structures in their RPS. Under the Planning and Development Act (PDA), local authorities are required to compile and maintain an RPS in their development plans. Sites included in the RPS are awarded automatic protection and may not be demolished or materially altered without grant of permission under the Planning Acts.

Architectural Conservation Areas (ACA)

ACAs comprise, as stated in the PDA, *'the character of a place, area, group of structures or townscape, taking account of building lines and heights, that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures.'* Provisions for the protection of ACAs are made by planning authorities as part of development plans, which includes the boundaries of ACAs.

United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage Sites (WHS)

The WHS includes cultural and natural heritage sites around the world considered to be of outstanding value to humanity. There are two UNESCO sites within Ireland, Brú na Bóinne in County Meath and Skellig Michael in County Kerry.

The following sites have been submitted by Ireland for consideration the tentative WHS list:

- Early Medieval Monastic Sites of Clonmacnoise, Durrow, Glendalough, Inis Cealtra, Kells and Monasterboice;
- The Burren;
- Céide Fields and North West Mayo Boglands;

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- The Historic City of Dublin;
- The Monastic City of Clonmacnoise and its Cultural Landscape;
- The Royal Sites of Ireland: Cashel, Dún Ailinne, Hill of Uisneach, Rathcroghan Complex and Tara Complex;
- The Western Stone Forts;
- The Passage Tomb Landscape of County Sligo;
- Royal Sites of Ireland: Ancient Irish Sites of Royal Inauguration; and
- Transatlantic Cable Ensemble.

It is recognised that impacts to specific monuments and subsurface unknown archaeological/architectural features are more appropriately assessed at a project level e.g. proposals for new infrastructure.

5.3.8.2 Other Heritage

Inland, Coastal and Marine Heritage

There are a number of water-related sites such as buildings and structures listed for their engineering importance within the National Industrial Engineering Heritage (NIEH) maintained by the Engineering Department of Trinity College. There are a number of inland and coastal water-related engineering features listed, for example: the engineering complexes of the Grand and Royal Canals, water mills, bridges and weirs, lighthouses and breakwaters.

In general, the majority of marine archaeological features occur beyond the one-mile limit for transitional and coastal water bodies. Hydrographic charts for Ireland mark numerous wrecks and seabed obstructions; however, these are primarily for navigational rather than cultural heritage importance.

Due to the number of historic ports and settlements throughout coastal regions, there are thought to be several thousand wrecks in the coastal waters of Ireland, such as those associated with various ports along the coast. Some wrecks, such as the Thomas Petley, date back to the 11th century, while the remnants of Viking trading links, ports and vessels date back to the 8th century. The GSI's INFOMAR Programme has compiled a shipwreck database containing 457 wrecks. The Marine Institute's marine Atlas also contains a shipwreck inventory, with additional sites compiled from other sources (e.g., WreckSites.eu). The National Monuments Service's Wreck Inventory of Ireland Database (WIID) includes approximately 18,000 records of known wrecks, however only approximately 4,000 of these have precise locations; these sites are variously located within Ireland's inshore waterways (such as lakes and rivers) as well as in the territorial waters. The Department for Communities in Northern Ireland also maintain a database of wrecks within their territorial waters.

In Ireland, legislation is in place to protect wrecks and archaeological features/objects within Ireland's territorial waters. The Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 (Act 26 of 2023) is the primary legislation for the protection of wrecks over 100 years old and other features irrespective of their age. Underwater heritage orders may also be placed on features less than 100 years old if they are considered to be of important historical, cultural or archaeological importance e.g., the *RMS Lusitania*.

Much of Ireland's inshore cultural marine heritage is unrecorded. There are estimated to be thousands of wrecks in Ireland's inshore waters. Most of these are currently unknown and difficult to detect, especially those of wooden construction, though most of these wrecks and structures are thought to be associated with historic ports, harbours and their approaches.

Transboundary / Shared Heritage

It is noted that a large number of heritage assets predate the border with Northern Ireland. Such features, including bridges and mill races for instance, traverse the border. Some wrecks occur in shared bays and coastal areas such as Carlingford Lough and There are associated transboundary qualities of these features which includes the inter-relationships of sites, buildings and places and their heritage setting.

Sites and Properties

In addition to the monument registers, there are a number of properties and areas managed by cultural heritage groups in Ireland. These are structures or areas that have been passed to the care of responsible bodies for restoration, public access and amenity value. Examples include for instance the Sieges of Kinsale

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and Cork, the Battle of the Boyne, Connemara National Park (covering 4,942 acres of scenic countryside and coastal habitats), and the Burren landscape and visitor centre. The UNESCO Copper Coast Geopark, located between Tramore and Dungarvan, is a site considered to be an 'outdoor geology museum'; in addition to its geological heritage, the area is also known for its cultural heritage such as dolmens, Iron Age forts, inscribed stones, medieval churches and a castle that is owned by a community group.

5.3.8.3 Existing Environmental Pressures/ Problems: Cultural Heritage

Development resulting from economic growth and increasing population is placing pressure on sites or features of architectural, archaeological or cultural heritage interest. Individually these developments put direct pressure on architectural heritage, where it is in proximity, or increases the potential to interact with known or previously unknown archaeological sites and features. Cumulatively, this results in impacts on the overall cultural heritage resource.

In this context, the key issues associated with the implementation of the draft first revision to the NPF and cultural heritage relate to:

- To preserve and protect the cultural heritage including architecture, archaeology and cultural heritage from unsustainable development;
- Impacts on archaeological features and setting;
- Impacts for underwater archaeological features during construction of new infrastructure and/ or upgrades; and
- Heritage sites in the border area should be considered, particularly cross-border assets e.g. the Ulster Canal and the Black Pigs Dyke.

5.3.9 Landscape and Seascape

Broadly speaking, landscapes/seascape are areas that are perceived by people which are made up of a number of layers:

- Landform, which results from geological and geomorphological history;
- Land cover, which includes vegetation, water, and human settlements; and
- Human values, which are a result of historical, cultural, religious, and other understandings and interactions with landform and land cover.

The baseline relevant to the draft first revision to the NPF in relation to landscape and seascape is as follows:

- Landscape and Seascape – character and amenity.
- Designated landscapes – nationally important landscapes, protected views.

5.3.9.1 Landscape Assessment in Ireland

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

The National Landscape Strategy for Ireland (2015-2025) was produced in line with Ireland's obligations under the convention. It outlines six key objectives and actions, one of which is to develop a National Landscape Character Assessment. It proposed that Landscape Character Assessments would be prepared at local and intra-local authority level however, there has been limited to no progress on developing these. It is intended that these regional and local landscape character assessments would inform and guide landscape policy, action plans and local authority development plans.

In the absence of national or regional guidance and assessments, local authorities currently conserve and protect scenic value as areas of high amenity, high sensitivity, areas of outstanding natural beauty, protected views and similar designations, but the approach is uncoordinated and can lead to different prioritisations in

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neighbouring counties. Each local authority is responsible for the designation of these within their individual jurisdictions, with each development plan providing objectives to protect such scenic values. It is noted the National Landscape Strategy does not specifically mention 'seascape' but is included as part of the Landscape Convention: *'The Convention covers natural, urban, peri-urban and rural areas, encompassing land, inland water, coastal and marine areas.'*

Further, seascapes are increasingly being recognised as being a key element of the coastal and marine environment. Seascape characterisation should form an integral part of any overall landscape character assessment (LCA) where there is any coastal element. For instance, some local authorities have already undertaken LCAs which also consider seascape, e.g., Donegal and Clare. Northern Ireland as an example has undertaken regional landscape and seascape character assessments, and the digital data is available from DAERA.¹⁰⁸

The Offshore Renewable Energy Development Plan (OREDPA) undertook an intermediate step towards national LCA by outlining a high-level methodology for seascape character assessment as part of a desktop study by describing the key characteristics of strategic seascapes Ireland, and outlined which areas are likely to be least sensitive to offshore renewable energy development. The approach was adapted from DTI Guidance on Seascape and Visual Impact Assessment of Offshore Wind Farms and the good practice outlined in the Guidelines for Landscape and Visual Impact Assessment (GLVIA), published by the Landscape Institute and the Institute of Environmental Management and Assessment in 2002. More recently, in 2020 the Marine Institute published a Draft Regional Seascape Character Assessment for Ireland for consultation, and the maps and GIS information is available from the Marine Institute.¹⁰⁹ The SCA's identified around the coast of Ireland are as follows:

SCA 1: Border SCA Lough Foyle	SCA 10: Atlantic Celtic Bays and Estuaries
SCA 2: North Donegal Atlantic Headlands, Loughs and Beaches	SCA 11: Cork Harbour and Estuary
SCA 3: North Atlantic Islands, Headlands and Beaches	SCA 12: Celtic Sea bays and beaches
SCA 4: Sligo Bay	SCA 13: South East Irish Sea
SCA 5: Atlantic North Mayo & Galway	SCA 14: Irish Sea, Sandbanks and broad bays
SCA 6: Atlantic Galway Bay and Islands	SCA 15: Dublin Bay
SCA 7: Atlantic Clare Cliffs	SCA 16: Northeastern Irish Sea Islands and Beaches
SCA 8: Shannon Estuary and Tralee Bay	SCA 17: Border SCA -Carlingford Lough
SCA 9: Atlantic South West Rias, Bays and Islands	

Geomorphology also forms a key consideration for how landscape character areas are delineated. The GSI has published a 'Physiographic Units' dataset, which shows cartographic representations of broad-scale physical landscape of a region. These are available as part of a three-tier hierarchy, with different levels of detail depending on the needs of the end user. Data is available from the GSI's web viewer.¹¹⁰

5.3.9.2 Protected Landscape Areas

In terms of landscape and visual amenity, local authorities in Ireland conserve and protect scenic value as Special Amenity Areas, Areas of Outstanding Natural Beauty (of Northern Ireland as appropriate) and Protected Views, Prospects, Scenic Routes etc. Each local authority is responsible for the designation of these within their individual jurisdictions, with each Development Plan providing objectives to protect such views.

¹⁰⁸ DAERA Landscape digital data available at: <https://www.daera-ni.gov.uk/articles/download-digital-datasets>

¹⁰⁹ Marine Institute – Definition and Classification of Ireland's Seascapes: <https://emff.marine.ie/blue-growth/definition-and-classification-ireland%E2%80%99s-seascapes>

¹¹⁰ GSI web viewer – see tab 'Physiographic Units': <https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4c0ab2fbde2aac3c228>

5.3.9.3 Building Height

Building heights in towns and cities also contributes to the landscape of a city, its skyline or 'cityscape'. Taller buildings can help to densify cities through more efficient use of the vertical space. Building heights in Ireland are typically low compared to other cities. Some of the tallest storied buildings in Ireland currently include, for instance: Capital Dock, Dublin (mixed-use: 22 storeys/79 m), The Exo Building, Dublin (office: 17 storeys/ 73 m), the Elysian in Cork (residential/offices: 17 storeys/ 71m), the Google Docks (offices: 14 storeys/ 67m), Cork County Hall (offices: 17 storeys/ 67m) and Millennium Tower (residential: 16 storeys/ 63m).

Some of the city development plans (DP) have policies which relate to building height. The current Dublin City DP (2022-28) emphasises that will be the requirement to consider greater height in appropriate locations aligned with the principle of greater densification as part of the urban form and spatial structure of Dublin. The Fingal DP 2023-2029 have policies that support increased building height particularly in town/city centres.

The Cork City DP (2022-2028) was informed by a study done by Cork City Council, the Cork City Urban Density, Building Height and Tall Building Study. The Study has provided a key input into the residential density assumptions that underlie the Core Strategy and other development objectives of this plan. It also sets out targets in relation to the number of storeys (building heights) in different parts of the city including the city centre, city fringes and inner urban suburbs.

Galway City DP (2017-2023) was informed by Galway City Urban Density and Building Height Study (2021). One of the objectives in the Galway City DP (2017-2023) states that proposals for buildings taller than the prevailing heights will only be considered where it is considered that there is no adverse impact on historic setting/protected architectural areas, views and residential amenity. In the current Waterford City DP (2022-2028), 16 no. of sites have been identified with potential to accommodate taller buildings (Above 4 floors in height) and higher densities.

5.3.9.4 Existing Environmental Pressures/ Problems: Landscape and Seascape

The National Landscape Strategy is the means by which the State provides a framework for the protection of the many cultural, social, economic and environmental values embedded in the landscape with a key action to develop a National Landscape Character Assessment. To date, this has not been published. While a high-level of protection is often afforded in development plans, and other datasets are available (such as Regional Seascapes and Physiographic Units) the lack of national and regional level landscape character assessments and guidelines has to date led to an inconsistent and fragmented approach to assessments across local authorities.

Development activities resulting may place pressure on sites or features of scenic or amenity value. Existing pressures on landscape and visual resources are primarily related to impacts to sensitive views and landscapes resulting from the secondary impacts from the siting of development. The absence of a cohesive national landscape strategy which seeks to preserve and /or protect such historical and cultural landscapes, landscapes of amenity and social value and features of scenic value places much of the emphasis on local authorities, and the approaches taken are often not consistent. However the publication of a regional seascape character assessment in 2020 has bridged some the gap in relation to a consistent approach to seascapes.

The draft Plan generally contains no location-specific detail. Development proposals for new infrastructure will be subject to the outcomes of the planning process and any required environmental assessments, e.g. landscape/seascape/townscape visual impact assessments, as appropriate. Future proposals will have to have regard to the criteria set out in the relevant local land use policy.

In this context, the key issues associated with the implementation of the draft first revision to the NPF and landscape/seascape relate to:

- Effects on the general landscape as well as seascapes; and
- Impacts to landscape, seascape and/or visual impact from new infrastructure or larger-scale facilities e.g. related to district heating, wind and solar farm development etc.

5.3.10 Inter-relationships

In accordance with the SEA Directive, the interrelationship between the SEA environmental topics must be taken into account. **Table 5-14** highlights the key interrelationships identified in this SEA. These potential interrelationships have been taken into account in the assessment of the different alternatives. A key interrelationship is between population and human health, air quality and climate. Another key interaction is between climatic factors, air quality, water, biodiversity, land and soils with material assets. In these cases, emissions to environmental receptors (air, surface and groundwaters, and soils) from development activities have implications for the quality of human health as well as the natural environment. There may also be 'intangible' interactions between factors; for instance, many sites of biodiversity value may also comprise sites of heritage significance e.g. the Burren landscape and Skellig Michael World Heritage Property.

There is not considered to be an interaction between the topics of air quality and landscape. There is also not considered to be a significant interaction between air quality and land and soils; it is acknowledged that changes in land use can result in disturbance or loss of the soil resource which has implications for soil carbon storage and emission of GHGs from the land use, land use change and forestry sector, however this is acknowledge the interaction between the topics of climatic factors and land and soils.

Table 5-14: Inter-relationships between SEA Topics

Biodiversity, Flora & Fauna									
Population & Human Health	✓								
Land & Soils	✓	✓							
Water	✓	✓	✓						
Air Quality	✓	✓	x	✓					
Climatic Factors	✓	✓	✓	✓	✓				
Material Assets	✓	✓	✓	✓	✓	✓			
Cultural Heritage	✓	✓	✓	✓	x	✓	✓		
Landscape	✓	✓	✓	✓	x	✓	✓	✓	
	Biodiversity Flora & Fauna	Population & Human Health	Land & Soils	Water	Air Quality	Climatic Factors	Material Assets	Cultural Heritage	Landscape

5.3.11 Evolution of the Baseline in the absence of the Draft NPF First Revision

The SEA legislation requires that consideration is given to the likely evolution of the current baseline where implementation of the draft first revision to the NPF does not take place. **Table 5-15** summarises the key points.

Table 5-15: Likely Evolution of the Baseline without Implementation of the Draft First Revision to the NPF

Environmental Area	Discussion on the Evolution of the Baseline in the Absence of the draft Plan
Population and Human Health	<p>Recent CSO 2022 census data indicates Ireland has a population of 5.12 million people, with the population projected to increase to 5.5 million in 2030, 5.9 million in 2040 and 6.2 million by 2050. The draft first revision to the NPF estimates that Ireland will be home to an additional one million people by 2040. These projected population increases will continue to increase pressure on land use, water/ wastewater and transport services, as well as social services such as education and healthcare provision. In the absence of the draft first revision to the NPF, this increased pressure will not be accounted for in terms of integration with evolving policy, giving rise to pressure on existing infrastructure and inadequate provision for future changes.</p> <p>The draft first revision to the NPF offers the opportunity to take stock of what has worked and not worked over the intervening years since the adoption of the first NPF in 2018. In the absence of the revision, there would be a lack of updated response to consider population distributions, demographic growth/changes and the balance of same. Legacy development patterns, such as peripheral growth in and around settlements, would continue unchecked in the absence of revisiting the national policy in relation to compact growth and a reconsideration of strategic 'how much and where' that is being outlined under the draft first revision to the NPF.</p> <p>Ireland's green and blue spaces, which include urban parks, coasts, lakes, rivers, forest and bogs, also contribute to overall health and wellbeing. The draft first revision to the NPF offers the opportunity to mainstream consideration of blue and green infrastructure and Nature-based Solutions into the planning policy hierarchy which will then influence the regional and county/local planning tiers.</p>
Biodiversity, Flora and Fauna	<p>In the absence of the draft first revision to the NPF, the fourth National Biodiversity Action Plan 2023-2027 would continue to be implemented. However, biodiversity loss is recognised as part of the 'triple planetary crises' which includes pollution and climate change. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in its report, Regional Assessment Report on Biodiversity and Ecosystem Services for Europe and Central Asia (IPBES, 2018) states that the major driver of the loss of biodiversity and ecosystem services to date has been land-use change, coupled with the impacts of climate change, and that economic growth in general has not yet been decoupled from environmental degradation. The UN Environment Programme (UNEP) also reports that the intensity of the global food system is the primary driver of biodiversity loss worldwide. The National Biodiversity Data Centre (NBDC) also highlights the serious deterioration in the health of Ireland's ecosystems, with the majority of protected habitats in poor or inadequate condition, and with 14% of species considered to be endangered.</p> <p>Without the draft first revision to the NPF, the pressure on aquatic and terrestrial flora, fauna and habitats is likely to continue with key drivers from development and land-use changes in addition to intensification of agriculture through initiatives such as Food Vision 2030. This is likely to lead to habitat loss and/ or fragmentation. In addition, there are changes expected to occur through climate change that may alter species and habitat ranges, with potential for range expansion of some invasive alien species which are an increasing concern. In the absence of the draft first revision to the NPF, measures to address these pressures may not be coordinated or focussed in relation to the most sensitive habitats and species leading to permanent loss of key species.</p>
Land and Soils	<p>In the absence of the draft first revision to the NPF, the soils, geology and hydrogeology environments would continue to exist in much the same pattern. Ireland generally has excellent soil quality and the estimated proportion of contaminated land is relatively small; the EPA State of the Environment Report 2020 states that nationally soil quality is not significantly impacted by contamination issues. To date, there is no legislative or regulatory framework at EU or national level for the protection of soils specifically. At EU level, soils do not have the same level of legal protection as air quality, water quality, or biodiversity. However the EU has proposed to introduce a Soil Monitoring Law.</p> <p>Without the implementation of the draft first revision to the NPF, other legislation and national level plans and programmes will continue be implemented. This will include for instance the Forestry Programme 2023-2027, Coillte Strategic Vision, Common Agricultural Policy Strategic Plan 2023-2027, Nitrates Regulation and Nitrates Action Programmes, National Peatlands Strategy and Bord na Móna Bog Rehabilitation Scheme, among others. Ireland is also implementing the revision to the Land Use, Land Use Change and Forestry (LULUCF) Regulation (EU) 2018/841, which aims to address greenhouse gas (GHG) emissions and removals from the LULUCF sector.</p> <p>In terms of land use planning, all development activities require a land footprint and/or some form of land use change to accommodate development, whether for transport, energy or social services infrastructure. Demands on the land resource will increase over time in tandem with infrastructure services demands and general resource consumption patterns. Any greenfield development will</p>

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lead to some loss of the soil/land resource via effects such as soil sealing, which the EPA recognises is a key pressure on the national soil resource.

However the implementation of the draft first revision to the NPF offers the strategic national policy basis to address urban sprawl, which would continue in a more uncontrolled fashion in the absence of NPF policies and targets on compact growth in particular.

Water

In the absence of the draft first revision to the NPF, water quality in Ireland will continue to be addressed in line with efforts being made by the River Basin Management Plan and its Programme of Measures throughout Ireland, though the general trend for water quality in Ireland is of decline. The top sources of significant pressures affecting water bodies at risk of achieving their WFD objectives are agriculture, followed by hydromorphological issues, anthropogenic pressures, urban wastewater, urban run-off and forestry, among others. While agriculture remains the main driver of issues, other top drivers of pressures on the water environment are urban-type pressures and anthropogenic pressures can include nutrient, organic and sediment pollution as well as chemical and microbiological issues.

These aspects are relevant for the draft first revision to the NPF as its policy base supports a wide range of sectoral activities. Water bodies impacted by diverse pressure sources means there is less resiliency for the water environment in general to absorb additional pressures. Such pressures are also made more difficult to address in the face of changing environmental conditions such as climate change impacts (increased water temperatures, changing pH, droughts and low river/lake levels etc.). Pressures also arise from the demands placed on the water environment to serve a growing population e.g. the need for new water sources to supply sufficient headroom for the existing population, as well as catering for growth demands. A number of urban areas also continue to not meet the full requirements of the EU Urban Waste Water Treatment Directive, and a number of agglomerations continue to discharge raw sewage into receiving waters.

In the absence of the draft first revision to the NPF, there would be less opportunity and coordinated action to consider the growth needs of the country and to set out national policy that affirms the need for the required levels of investment in water supply and wastewater services infrastructure in particular, not just for current population levels, but for the projected growth.

Air Quality

Air quality in Ireland is of a good standard generally across the country when examined from a national level, meeting most EU air quality standards. However some pollutants are consistently above the stricter WHO limits, such as particulate matter, nitrogen dioxides and ozone. Localised air quality issues remain, particularly in built-up areas, where burning of solid fuel (such as wood, peat and coal) as well as tailpipe emissions from vehicles are key sources of air pollution.

Existing programmes such as the National Clean Air strategy and the implementation of the National Air Quality Monitoring Programme, as well as the EU's move to adopt the stricter WHO air quality guideline values are expected to lead to air quality improvements.

As compact growth is a key aspect of the NPF, air quality issues may compound as more people are concentrated into built-up areas, particularly where the implementation of other wider policy measures are not occurring at the same pace, such as modal shift (to public transport, active travel or electric vehicle rollout), and rollout of renewable energy and shift towards electrification for power generation and heating, particularly in the built environment.

However the implementation of the draft first revision to the NPF allows for these important considerations in national land use planning policy.

Climatic Factors

As a result of anthropogenic greenhouse gas (GHG) emissions, climate change is predicted to occur in the future regardless of action. The UN Intergovernmental Panel on Climate Change predicts sea level rise, changes in rainfall patterns and temperatures as well as changes in the frequency of droughts and extreme weather events, such as increased flooding. The potential impacts from sea level increases, increased flooding, summer droughts, etc. may impact on the resiliency of infrastructure and the environment more generally. The scale and pace of change needed to realise Ireland's national and EU targets is highly challenging. The sectoral emissions ceilings and carbon budgets have also been placed on a statutory basis, and they constrain total fossil fuel energy use.

In the absence of the draft first revision to the NPF, other national level plans would continue to be implemented such as the annual Climate Action Plans (CAPs), which have been placed on a statutory basis since 2021, and the national Long Term Strategy on Greenhouse Gas Emissions Reductions (July 2023), which looks beyond 2030 to the pathways for climate neutrality by 2050. The CAPs are 'umbrella' plans which collate various sectoral policies, actions and measures together as Ireland's overall strategy for achieving the national climate objectives.

However, in the absence of the draft Plan, there would be lack of land use planning policy that is being coordinated at national level. The implementation of the NPF provides the national-level policy backing to support and encourage the development of large-scale renewable energy

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solutions (namely wind and solar, among other aspects), which will help to direct and drive policy at the lower planning levels, and particularly at the regional level. For instance, a key update in the draft first revision to the NPF is the assignment of regional renewable electricity allocations to the three Regional Authorities via a new NPO, with a requirement in another new NPO for local authorities to also plan for the delivery of power capacity allocations that is consistent with the regional allocations. With such new policy developments in places, there is greater opportunity for large-scale decarbonisation to be realised in the coming years.

Material Assets

In the absence of the draft first revision to the NPF, the Uisce Éireann Investment Programme and asset maintenance works would take place independently resulting in upgrades to wastewater treatment plants. The Water Services Strategic Plan would also continue to be implemented, along with the suite of sectoral climate change adaption plans published for various sectors. Other government strategies such as the Whole of Government Circular Economy Strategy and the National Waste Management Plan for a Circular Economy 2024-2030 would continue to be implemented. Driving circular economy principles in line with the waste hierarchy.

In the absence of the draft first revision to the NPF, the suite of programmes and plans associated with transport such as the various Metropolitan Area Transport Strategies, National Investment Framework for Transport in Ireland and various active travel programme etc. would also continue to be implemented. The population in Ireland will however continue to grow, with the associated demand for infrastructure as well as municipal, community, and social services.

With the implantation of the draft first revision to the NPF, there is more coordinated activity in order to achieve modal shift, as well as driving reduced materials consumption in both the circular economy and other sectors (Nearly Zero Emissions Buildings (NZEB) under the built environment sector), as both circular economy and transport sectors are included within the draft first revision to the NPF.

In the absence of the draft first revision to the NPF, the suite of EirGrid and SONI Capacity Statements, Implementation Plans and National Development Portfolio would continue to be produced and grid and transmission systems upgraded and invested in. Likewise the ESB Networks for Net Zero Strategy and the GNI Network Development Plan and Ten-year Capacity Statements will be implemented. Renewable energy resources, specifically renewable electricity from solar and wind power have the potential to provide a stable, sustainable, and low carbon renewable electricity source. This energy source can therefore contribute to increased renewables deployment and the range of options available to support the move to low carbon alternatives, help meet renewable electricity targets and assist in the transition to a climate neutral economy. In the absence of the draft first revision to the NPF, renewable energy development would continue however, it would lack national land use planning support and direction, which is being provided via the inclusion of regional renewable electricity allocations.

Without the draft first revision to the NPF, these various scenarios would continue to be managed in a less coordinated manner, thus the cumulative and synergistic impacts on the environment would continue. Critically without the draft NPF there would remain an uncoordinated approach to assigning resources and targeting those resources to the greatest need.

While Ireland has made some progress in recent years, delays in the financing, planning and delivery of key infrastructure developments have negatively affected Ireland's competitiveness over the past decade, and the benefits of greater sustainability in how people live and work will be key to ensuring competitiveness into the future. The implementation of the draft first revision to the NPF has the potential to enhance certainty in the environment faced by businesses which have to compete in markets, both national and international, by providing greater clarity on how we are developing more sustainable physical infrastructure. The NPF offers a framework for the planning of public investment in infrastructure, including housing, to be strategically prioritised and sequenced.

Cultural Heritage

In the absence of the draft first revision to the NPF, cultural heritage concerns would continue to be dealt with as part of the planning processes and related environmental assessments at lower planning tiers and at the project level. However, potential synergies with other sectors, such as reuse of the existing built building stock, which includes heritage features, as well as coordinated targets for retrofitting, would have a less coordinated approach and a lack of such measures reflected in a statutory plan in the absence of the draft first revision to the NPF.

Landscape

In the absence of the draft first revision to the NPF, the uncoordinated approach to planning measures could result in unnecessary impacts to protected or sensitive landscape and seascape. These landscape and visual concerns would continue to be dealt with as part of the planning processes and related environmental assessments at lower planning tiers and at the project level.

6 FRAMEWORK FOR ASSESSMENT

6.1 Introduction

Strategic Environmental Assessment, as its name suggests, is set at a strategic level, therefore it is not possible for the baseline environment to be described (and assessed) in as much detail as could be done for a project-level EIA. Instead, SEA uses a system of objectives, targets and indicators to set a framework for assessment of a plan.



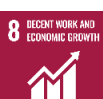



In order to streamline the assessment process, this report has used broad themes, based on the environmental topics listed in the SEA Directive, to group large environmental datasets, e.g. human health, soil, air quality, etc. Assigned to each of these themes is at least one high-level Strategic Environmental Objective (SEO) that specifies a desired direction for change, e.g. reduce CO₂ emissions, safeguard soil quality etc., against which the future impacts of plan can be measured; these high-level SEOs are then paired with specific assessment criteria.

6.2 Development of Strategic Environmental Objectives









Establishing appropriate criteria for the assessment of the effects of the draft first revision to the NPF started at scoping stage where a series of proposed SEA objectives and guide questions were developed. These objectives and questions are reflective of the extent of the assessment criteria listed in the SEA Directive; the scope of the draft first revision to the NPF; wider environmental protection objectives at a national, European and international level (identified in **Chapter 4**); consultation feedback from scoping; and the baseline information collated in **Chapter 5**.

Each of the draft first revision to the NPF alternatives and the preferred scenario have been assessed against these SEOs to establish where they will contribute (or not) to achieving the desired outcomes; see **Table 6-1**. Interlinkages with relevant UN SDGs are also outlined which aims to show how draft first revision to the NPF can contribute more generally to the national policy effort on achieving the SDGs through its implementation.






Table 6-1: SEA Objectives for the Assessment of the Draft First Revision to the NPF

Related to SEA Topic(s)	Strategic Environmental Objective	Relevant UN Sustainable Development Goal(s)
Population and Human Health (PHH)	(i) To create an environment where every individual and sector of society can play their part in achieving a more healthy, sustainable and climate-neutral Ireland.	 GOAL 3: Ensure healthy lives and promote well-being for all at all ages
	(ii) Ensure a just transition for workers and communities, in terms of jobs and opportunities in the transformation toward a sustainable and climate-neutral Ireland.	 GOAL 7: Ensure access to affordable, reliable, sustainable and modern energy for all
	(iii) Ensure access to suitable housing which includes a mix of tenures to support all sectors in society.	 GOAL 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
	(iv) Provide sufficient capacity in healthcare and education to support all sectors in society.	 GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable
	(v) Ensure that wastewater treatment is adequate for the populations proposed, including seasonal fluctuations and is compliant with relevant EU standards (Note: also relevant in the context of Material Assets).	 GOAL 12: Ensure sustainable consumption and production patterns
Biodiversity, Flora and Fauna (BFF)	(i) Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species (including transboundary considerations).	 GOAL 14: Conserve and sustainably use the oceans, seas and marine resources for Sustainable development

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Related to SEA Topic(s)	Strategic Environmental Objective	Relevant UN Sustainable Development Goal(s)
	<ul style="list-style-type: none"> (ii) Protect biodiversity from the impacts of climate change and recognise the role of ecosystems and ecosystem services to increase the adaptive capacity of people and biodiversity, while also contributing to climate change mitigation. (iii) Protect and enhance ecological corridors/linkages for the benefit of biodiversity, and also locally act as carbon sinks. (iv) Create/protect ecologically resilient and varied landscapes to help support a wide range of species. 	 <p>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</p>
Land and Soil (LS)	<ul style="list-style-type: none"> (i) Prevent pollution which could impact soil quality and lead to degradation of the soil resource. (ii) Minimise land use changes that result in increased carbon emissions from soils. (iii) Maximise opportunities for soil carbon sequestration. (iv) Minimise use of greenfield sites for development. 	 <p>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</p>
Water (W)	Ensure forward planning and development management achieves compliance with the objectives of the WFD and MSFD for surface waters, groundwaters and marine waters.	 <p>GOAL 6: Ensure availability and sustainable management of water and sanitation for all</p>  <p>GOAL 14: Conserve and sustainably use the oceans, seas and marine resources for Sustainable development</p>
Air Quality (AQ)	<ul style="list-style-type: none"> (i) Avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air, including transboundary considerations. (ii) Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency. 	 <p>GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable</p>
Climatic Factors (CF)	<ul style="list-style-type: none"> (i) Minimise existing and avoid new emissions of greenhouse gases across the land use sector and through integrated transport and land use planning (ii) Decrease the usage of fossil fuels and increase renewable energy usage. (iii) Preserve, protect and maintain natural carbon sinks (e.g., peatlands/ wetlands/ forests). (iv) Increase resilience of communities to flood risk resulting from climate change. (v) Contribute to achieving the national climate objective to transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050. 	 <p>GOAL 13: Take urgent action to combat climate change and its impacts</p>  <p>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</p>
Material Assets (MA)	<ul style="list-style-type: none"> (i) Consolidate growth and limit urban sprawl through integrated transport and land use planning 	 <p>GOAL 7: Ensure access to affordable, reliable, sustainable and modern energy for all</p>

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Related to SEA Topic(s)	Strategic Environmental Objective	Relevant UN Sustainable Development Goal(s)
	<ul style="list-style-type: none"> (ii) Optimise use of existing infrastructure/ built environment, raw materials and energy (including energy efficiency). (iii) Contribute to circular economy principles, including supporting and promoting the use of waste as a resource. (iv) Contribute to climate change adaptation through ensuring the robustness and resiliency of new infrastructure to the effects of climate change. <p>See also PHH for Wastewater Treatment</p>	<div>  <p>GOAL 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p> </div> <div>  <p>GOAL 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p> </div> <div>  <p>GOAL 12: Ensure sustainable consumption and production patterns</p> </div>
Cultural Heritage (CH)	Protect and plan for the management of places, features, buildings and landscapes of cultural, historical archaeological or architectural heritage.	<div>  <p>GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable</p> </div>
Landscape and Seascape (LandS)	<ul style="list-style-type: none"> (i) Protect and maintain landscape character and visual amenity, including designated and unique landscapes. (ii) Recognise and respect the value of wider (non-designated) landscapes and seascapes. 	<div>  <p>GOAL 11: Make cities and human settlements inclusive, safe, resilient and sustainable</p> </div>

7 CONSIDERATION OF ALTERNATIVES

7.1 Introduction

The consideration of alternatives is a requirement of the SEA Directive (2001/42/EC). Article 5(1)¹¹¹ states:

“Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.”

Furthermore the requirement of Article 5(1) is further explained by Article 5(2), which states:

“The environmental report prepared pursuant to paragraph 1 shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment.”

The Directive does not prescribe at what stage consideration of alternatives should be undertaken, however, to present a useful input into the plan making process, guidance points to considering alternatives as early as possible^{112, 113}. Guidance also recognises that multiple layers of alternatives may exist, particularly for plans of this nature. Given the nature of the draft Plan, alternatives have been focused primarily at the strategic level.

Given that the draft plan is a revision of the existing NPF, alternatives have been developed in the context of revisions rather than new strategic approaches. It is intended that the revision will address a number of key drivers including climate transition, regional development and demographic change in line with Census 2022 results and analysis from the ESRI carried out in 2023-2024. It is intended that the NPF revision will update policies, where appropriate and therefore the scope of alternatives will be constrained.

7.2 Context for Consideration of Population Growth and Distribution

7.2.1 Recent Trends and Projections

A cornerstone policy of the NPF is to achieve a greater regional balance in population and employment growth. The goal of which is to see a roughly 50:50 distribution of growth between the Eastern and Midland region, and the Southern and Northern and Western Regions, with 75% of the growth to be outside of Dublin and its suburbs. The NPF also targets the five cities (Dublin, Cork, Limerick, Galway and Waterford) for 50% of overall national growth between them, with Ireland's large and smaller towns, villages and rural areas accommodating the other 50% growth.

Population growth and demographic change are vital considerations for the NPF revision. The Economic and Social Research Institute (ESRI) work undertaken for the NPF in 2018 indicated that Ireland's population will grow by around one million additional people, to almost 5.7 million people by 2040. The results of Census 2022 have highlighted that the population increased by 8.1% compared with the 2016 census and there were 5,149,139 people in the State on 3rd April 2022. It is now estimated that the population will have risen to almost 5.35m in the first half of 2024, when the revised NPF is published. The ESRI current projection is that the population will increase to around 5.7m by 2030 and 6.1m by 2040.

Population growth was strong between 2016 and 2022, with a net increase of around 65,000 people per annum. This has further increased by around 50% in the two years since 2022, with a net increase of almost 100,000 people per annum, largely due to historically high levels of net in-migration. The ESRI project that while the population will continue to grow, the rate of increase will decline to 2030 and further again to 2040.

¹¹¹ Directive 2001/42/EC On the assessment of effects of certain plans and programmes on the environment, EC 2001

¹¹² Developing and Assessing Alternatives in Strategic Environmental Assessment, EPA Research Report No. 157, 2015

¹¹³ Strategic Environmental Assessment Guidelines for Regional Assemblies and Planning Authorities, DHLGH, 2022

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Ireland's population is expected to continue growing at a relatively high level in comparison to the EU average however, unless affected by unforeseen events such as a severe economic shock.

To provide context, the scale of population growth projected by the ESRI from 2024 to 2030 is broadly similar to that experienced in Ireland between 2016 and 2022. This means that when added to the accelerated 0.2m increase in population that has already occurred since 2022, there will be around 5.7m people in Ireland by 2030. A further similar level of increase to that anticipated during 2024-2030 is also projected, but over a longer 10-year period 2030-2040, which will bring the population to 6.1m. It is expected that as the population ages and net migration slows, this will prompt a slower growth rate.

7.2.2 Comparison to Previous Projections

In both 2017 and 2020, the ESRI projected a population of around 5.7m people in Ireland by 2040. The updated projection of 5.7m people by 2030 therefore indicates that the previously estimated 2040 population is anticipated to materialise 10 years sooner than expected. The previous ESRI projection was for around 0.9m people above Census 2016 levels by 2040. It is now estimated that there will be around 1.35m people above Census 2016 levels by 2040, which would be 50% more growth than had been expected over the period.

Although based on previous ESRI demographic and econometric projections, the NPF strategy document (2018) added a further factor of 25% to the level of growth considered necessary to plan for. As a result, the NPF plans for growth of 1.1m people and a population of 5.85m in Ireland by 2040. This is still 0.25m people less than that now projected. It is therefore considered critical to focus on the period to 2030 for this revision. There will be a Census of population in 2027 and a further scheduled update of the NPF by 2030. This will enable progress towards the targets for the period to 2030 to be reviewed, and the NPF strategy to be further amended as required.

NPF National Policy Objectives 8 and 9 establish a target to deliver at least half (50%) of all new homes that are targeted in the five Cities and suburbs and at least 30% of all new homes that are targeted in settlements other than the five Cities and their suburbs, within their existing built-up footprints. These targets have now been integrated into policy at a local level in recently adopted city and county Development Plans and have informed land use zoning and the devising of core strategies.

A number of calls have been made to critically re-examine these compact growth targets as part of the stakeholder engagement. The Expert Review Group, the Department of Transport and others have suggested that the targets should be increased, partly in response to the very ambitious CAP23 emissions ceiling targets for the transport sector which require a reduction in the need to travel.

Examining data for housing completions in 2022, the NPF target of '40% of development to be located within the built-up area', has been comfortably achieved in all but two counties, with the average rate across all counties being c.60% of development taking place within settlement boundaries which exceeds the target.

The recently published Sustainable Residential Development and Compact Settlements Guidelines will enable more own-door housing at medium and higher densities; vacancy and viability-related financial support schemes are being initiated; Town Centre First (TCF) plans are being rolled out; and the Planning and Development Bill 2023 includes a provision for 10 year development plans, to enable higher housing targets over a longer timeframe.

7.3 Approach to Alternatives for the Draft Plan

Both the Plan team and the SEA team were conscious of the need for iteration with regard to alternatives and, as such, alternatives were first considered during the SEA Scoping stage. The basis for alternatives discussions has been the EPA Guidance: Developing & Assessing Alternatives in Strategic Environmental Assessment. This guidance points to achieving four key criteria for identification of alternatives (**Figure 7.1**).



Figure 7.1: Criteria for Alternatives Considered [Source: EPA Guidance, 2015]

In the context of the first revision to the NPF the criteria considered were:

- **Realistic:** Does the alternative achieve the objectives of national policy and objectives in relation to climate, environmental protection, land use and other inter-related sectors? Does the alternative have the capacity to deliver the required outcomes of the plan? Is the alternative within the legal competence of the plan-making authority.
- **Reasonable:** Do the alternatives consider baselines and trends in environmental quality, do they reflect the legal requirement under inter-related environmental protection legislation such as the Habitats Directive and the Climate Act 2015, as amended;
- **Viable:** Are the alternatives technically possible and feasible on the ground within the timeframe of the plan; and
- **Implementable:** Are the alternatives capable of being put into action, within realistic timeframes, and for which there are adequate resources including supporting infrastructure.

The SEA Scoping Report also included a series of high-level considerations on alternatives for discussion under a range of categories as shown in **Figure 7.2**. The intention of the types of alternatives identified in Figure 7-2 is to stimulate discussion and there is no requirement to identify alternatives under each category, only those relevant to the draft Plan. With reference to criteria and types, the Scoping Report provided an early exploration of outline alternatives that could be relevant to the first revision to the NPF in order to stimulate discussion at scoping stage. The outline alternatives included in the Scoping Report are reproduced in **Table 7-1**.

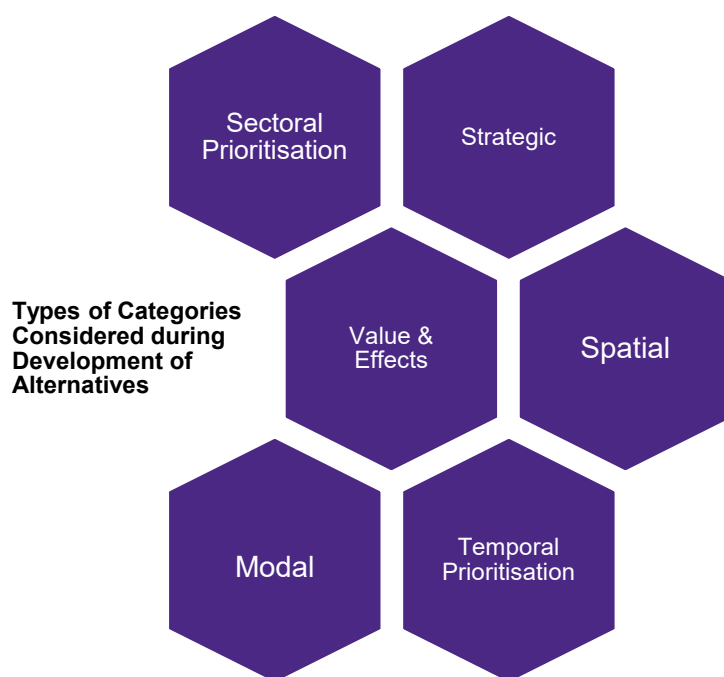


Figure 7.2: Alternatives Categories Considered

Table 7-1: Early Considerations with Respect to Alternatives for the draft First Revision to the NPF

Alternative Type	Description	Considerations with Respect for the Draft First Revision to the NPF	How has this been integrated into the Alternatives Assessment
Strategic	<i>High-level options that achieve a given objective.</i>	<ul style="list-style-type: none"> Business as usual (BaU), NPF First Revision, or full NPF review [decision made however the reasons will be recorded for transparency]. Achieve current targets for compact growth or consider more ambitious ones. 	<ul style="list-style-type: none"> BaU, replacement and revision options are considered in Table 7-2. Considered in Table 7-2 under Compact Growth Alternatives and assessed in Section 7.5.3.
Value and Effects Oriented	<p><i>Alternatives that address policy priorities, cultural values or safety issues. Such alternatives are most appropriate for addressing public perceptions, concerns and values.</i></p> <p><i>Alternatives that address issues identified during scoping. Such alternatives are effective at mitigating potential significant effects.</i></p>	<ul style="list-style-type: none"> Level of stakeholder engagement required. Ways of harnessing of support for planning and sustainable development in wider stakeholder base. Alternative ways of making the Metropolitan Area Strategic Plans more effective in bringing forward NPF priorities. Introduce new national strategic objective to manage rural housing or use existing tools / guidelines. 	<ul style="list-style-type: none"> Not specific alternatives identified Not specific alternatives identified Considered in Table 7-2 under City Focussed Development and assessed in Section 7.5.2. Not specific alternatives identified.

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Alternative Type	Description	Considerations with Respect for the Draft First Revision to the NPF	How has this been integrated into the Alternatives Assessment
		<ul style="list-style-type: none"> Alternative approaches to spatial equity i.e. how public space is made available, used, restricted. 	<ul style="list-style-type: none"> Not specific alternatives identified
Modal	<i>Different technical/ modal alternatives to achieve the same objective</i>	<ul style="list-style-type: none"> Existing model of monitoring effectiveness or new dedicated approach. 	<ul style="list-style-type: none"> No specific alternatives identified however monitoring approach revised based on outcomes of 2018 monitoring – See Chapter 9.
		<ul style="list-style-type: none"> Separate unit for delivery or department responsibility. 	<ul style="list-style-type: none"> No specific alternatives identified.
		<ul style="list-style-type: none"> Alternatives to achieve alignment of NPF and National, Regional and Local Plans, including County Development Plans 	<ul style="list-style-type: none"> No specific alternatives identified.
Sectoral and/ or Temporal Prioritisation	<p><i>Alternatives that look at sectoral feasibility and needs at the strategic level, policies can be formulated to promote one sector versus another.</i></p> <p><i>Alternatives for the timing of implementation of plan/ programme measures.</i></p> <p><i>These are most suitable at the local level for addressing infrastructure development.</i></p>	<ul style="list-style-type: none"> Alternative priorities to remove blocks or plug gaps e.g., broadband roll out, availability of services such as schools. 	<ul style="list-style-type: none"> Renewable energy targets considered in Table 7-2 and assessed in Section 7.5.4.

During the scoping phase, an environmental workshop was held on 21st November 2023, in which over 30 delegates took part. Roundtable discussions were facilitated with delegates being asked to discuss three questions. The second question asked: “*What reasonable alternatives should be considered for the draft NPF First Revision?*”. In the majority of cases, specific alternatives were not identified but rather broader issues were raised which should be considered under alternatives. **Table 7-2** provides a summary of the issues raised and how they have been integrated into the Alternatives Assessment.

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Table 7-2: Issues Raised by Stakeholders for the draft First Revision to the NPF

Issues Raised	How Has the Suggestion Been Considered within Alternatives
Reconsider previous NPF 2018 alternatives	Business as usual alternative included in Table 7-2.
Prioritise spatial equity particularly in north-western region and Midlands	Considered under Table 7-2 and in the assessments at Sections 7.5.1 and 7.5.2.
Regional Growth Centres should be given higher prominence	Considered under Table 7-2 and in the assessments at Sections 7.5.1 and 7.5.2.
City and town centres to have a greater focus	Considered under Table 7-2 and in the assessments at Sections 7.5.1 and 7.5.2.
Inclusion of nature-based solutions at a national policy level	Natural alternative now included in Table 7-2 and in assessment at Section 7.5.6
Policy approach for regional development could be more targeted and more nuanced for each region	Considered under Table 7-2 and in the assessments at Sections 7.5.1.
Compact growth and the need to ensure adequate water supply, biodiversity, provision of trees and urban greening etc.	Considered under compact growth alternative in Table 7-2 and in the assessment at Section 7.5.3.
Is 50:50 split for growth achievable? – should it be adjusted to 60:40 (Dublin Regional)	Considered under Table 7-2 and in the assessments at Sections 7.5.1 and 7.5.2.
Allocation of more than 50% of growth away from Dublin	Considered under Table 7-2 and in the assessments at Sections 7.5.1 and 7.5.2.
Infrastructure development projects can be targeted into the NW regions and midlands to provide employment opportunities in such areas.	Considered under Table 7-2 and in the assessments at Sections 7.5.1 and 7.5.2.
NPF currently targets growth in five cities – should fewer cities be targeted?	Considered under Table 7-2 and in the assessments at Sections 7.5.2 and 7.5.3.
Re-evaluation of MASPS	Considered under Table 7-2 and in the assessments at Sections 7.5.2.
Are the current MASPs appropriate considering sea level rise, extreme weather events and flooding?	Considered under Table 7-2 and in the assessments at Sections 7.5.54.
Support linear growth along transport corridors	Considered under the assessments at Sections 7.5.1-7.5.3.
Having a resilient electricity grid which supports targeted growth	Considered broadly under the assessments at Sections 7.5.1-7.5.3.
Alternative future could be significantly influenced by artificial intelligence (AI) and new ways of working, which could have spatial implications; dispersed working should be factored-in	Considered under assessments at Sections 7.5.1 to 7.5.4.
Development of green spaces and amenities should take place in parallel with increasing housing development	Considered under Table 7-2 and in the assessment at Section 7.5.3
Regional Development Monitor for RSES is good template	Noted. This is not an alternative, however the suggestion has been brought through to consideration of monitoring in Chapter 9 of this SEA Report.
Alignment of NPF monitoring with the monitoring for NMPF and have a holistic approach	Noted. This is not an alternative, however the suggestion has been brought through to consideration of monitoring in Chapter 9 of this SEA Report.
Long term implications for climate	Noted – this has been considered in all alternatives under the Climatic Factors topic.
Consideration of building standards of areas that are lagging behind	Noted – not an alternative but rather a tool to help decision makers. This has been included in the SEA Monitoring programme.
Greater focus to flood risk management	SFRA is being undertaken on NPF Revision.
Managed retreat for areas already prone to flooding and increased risk of same – Both City and County Cork mentioned	SFRA is being undertaken on NPF Revision

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Following the scoping phase, the early consideration of alternatives was developed further based on the statutory scoping feedback, wider public non-statutory feedback from the workshop and through focused discussions with the DHLGH. Based on this input, a list of possible draft Plan specific alternatives was generated which could be assessed. In the first instance, the long list of alternatives was assessed to determine if they met all the criteria outlined in **Figure 7.1**. This initial assessment in relation to the core criteria is recorded in **Table 7-3**. Those meeting the criteria were brought forward for further detailed assessment under the Strategic Environmental Objectives (SEO) outlined in Chapter 6 of this Environmental Report.

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Table 7-3: Long List of Alternatives Considered

Alternative Consideration	Realistic	Reasonable	Viable	Implementable	Outcome
Strategic Alternatives Considered (Decision preceded SEA commencement)					
Business as Usual	X	X	X	X	The Planning and Development Act 2000 (as amended) under Section 20C, requires the Government to either revise, replace or state why the Government has decided not to revise, every six years after the publication of the NPF. A number of significant changes have occurred since 2018 that render a Business as Usual approach not viable. These changes include new population projections, new environmental policy and legislation, changes in baseline environmental trends along with the effects of external drivers such as COVID and the war in Ukraine. A Business as Usual alternative was not brought forward for assessment as the Government decided in June 2023 to undertake a revision to the NPF. This preceded the SEA process and was mandated under a legal process that did not include SEA.
Replace the NPF	X	X	✓	✓	The NPF strategy is at an early stage of implementation, currently in the fifth year of a twenty year strategy. Consequently, while a complete replacement is viable and implementable, it was not considered reasonable or realistic at this stage as it would prevent or delay achieving national policy objectives across a range of sectors including climate and biodiversity. A replacement alternative was not brought forward for assessment as the Government decided in June 2023 to undertake a revision to the NPF.
Revise the NPF	✓	✓	✓	✓	The Government decided in June 2023 to undertake a revision to the NPF, in recognition of the need to account for particular changes which have taken place since 2018 while acknowledging the current stage at which the NPF is at within a wider 20 year timeframe. As the Government decided in June 2023 to undertake a revision to the NPF, this became the approach.
Balanced Regional Development					
Distribution of additional projected population to 2030 on a pro-rata basis	✓	✓	✓	✓	The principle of balanced regional development applied in 2018 remains a core tenant of the NPF however, population projections indicate that there will be additional population growth which needs to be accommodated up to 2030. This could be applied on a pro-rata basis in an effort to achieve equity across the three regions. Such an alternative is considered to meet all four criteria of reasonable, realistic, viable and implementable as it would achieve national policy objectives and the required outcomes of the NPF within the required timeframes and within the established framework. Some mitigations would be required. A pro-rata alternative has been brought forward for assessment – see Section 7.5.1.
Distribution of additional projected population to 2030 on a pro-rata modified basis	✓	✓	✓	✓	As above, the principle of balanced regional development applied in 2018 remains a core tenant of the NPF however, population projections indicate that there will be additional population growth which needs to be accommodated up to 2030. This could be applied on a modified basis to reflect shorter term demand and opportunity. Such alternative scenarios would be realistic in terms of achieving national policy objectives and achieving the required outcomes of the NPF and would

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Alternative Consideration	Realistic	Reasonable	Viable	Implementable	Outcome
					also reasonable as they could reflect regional trends in environmental and social albeit with some mitigation. A modified basis alternative has been brought forward for assessment – see Section 7.5.1.
City Focussed Development					
Business as Usual	X	X	X	X	Under this scenario, the city-based population growth target of 50% growth to 2040 for the five cities of Dublin, Cork, Limerick, Galway and Waterford remain unchanged from the NPF of 2018. Census 2022 shows a very mixed performance for the regional cities with only Waterford (+12%) and Limerick (+8%) achieving a growth rate above the national average of 8%. Both Galway and Cork grew at a rate below the national average. To achieve the ambitious NPF growth targets to 2040, each of these cities would need to see growth rates in excess of 10% each intercensal period. The business as usual approach is therefore not considered reasonable, realistic viable or implementable as it cannot deliver the required national policy objectives. A Business as Usual alternative was not brought forward for assessment.
Prioritisation of Cities	✓	✓	✓	✓	The NPF Objective of targeting 50% of growth to 2040 would be adjusted to direct a greater proportion of national growth to the five cities – c. r 65% in the short term and allow for growth at scale while providing appropriate employment, educational and health opportunities. The provision of investment would be aligned to this approach. Where investment and infrastructure can be aligned this alternative would be considered reasonable, realistic, viable and implementable in the context of the NPF as it offers the capacity to deliver the required outcomes of the plan, in the context of the new population growth projections and is building on the existing policy in terms of implementation. Some mitigation would be needed to ensure environmental protection. A prioritisation of cities alternative has been brought forward for assessment – see Section 7.5.2.
Prioritisation of Cities Modified	✓	✓	✓	✓	As per above however the approach would focus initially on emphasising growth in cities where there is existing capacity in services such as wastewater, affording other locations the time to enhance services to deal with additional population pressures. Wastewater capacity has implications for PHH in terms of recreational use of water as well as health implications from contaminated water. Inadequate public transport can result in unnecessary private car journeys with implications for AQ and CF. Insufficient health and education capacity can have negative effects for PHH and MA and may also require additional transport outside the catchment area. An alternative that responds to this is therefore considered realistic, reasonable viable And implementable. Focus away from areas with significant environmental issues and sensitivities would limit risk to the receiving environment in the short to medium term, allowing time for mitigation strategies to be put in place to prevent impacts rather than react to mitigate them. A modified prioritisation of cities alternative has been brought forward for assessment – see Section 7.5.2.

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Alternative Consideration	Realistic	Reasonable	Viable	Implementable	Outcome
Compact Growth					
Increase compact growth targets for all settlements	✓	✓	✓	✓	Under this scenario, compact growth targets are increased for all settlements to 60% in the cities and 40% in the towns, to provide an overall target of 50% of all growth to occur in a more compact form. Where investment and infrastructure can be aligned this alternative would be considered reasonable, realistic, viable and implementable in the context of the NPF as it offers the capacity to deliver the required outcomes of the plan, in the context of the new population growth projections and is building on the existing policy in terms of implementation. Some mitigation would be needed to ensure environmental protection. An increased targets for all settlements alternative has been brought forward for assessment – see Section 7.5.3.
Increase compact growth targets for Towns	✓	✓	✓	✓	Under this scenario, the compact growth target for towns (30%) is increased to 50% to match the target for cities, giving a national target overall of 50% of all growth to occur in a more compact form. Where investment and infrastructure can be aligned this alternative would be considered reasonable, realistic, viable and implementable in the context of the NPF as it offers the capacity to deliver the required outcomes of the plan, in the context of the new population growth projections and is building on the existing policy in terms of implementation. Some mitigation would be needed to ensure environmental protection. An increased targets for towns alternative has been brought forward for assessment – see Section 7.5.3.
Leave the compact growth targets unchanged	X	X	✓	✓	Under this scenario, the compact targets remain unchanged from the NPF, save for the use of the new census 'built up area' boundary which replaces the previously used settlement boundary from census 2016. Given the outcomes of the first cycle of the NPF and the updated population projections this alternative is not considered reasonable or realistic as it cannot deliver the compact growth required. A no change alternative was not brought forward for assessment.
Renewable Energy Alternatives					
Do-Nothing / Business as Usual	X	X	✓	✓	The onshore renewable electricity sector continues to develop in the absence of specific policy direction to enable the translation of the national targets set out in the Climate Action Plan to regional and local levels for onshore wind and solar PV development. Delivery of wind projects unlikely to proceed successfully, or only after protracted delays. No possibility of reaching 2030 CAP targets exists. Solar projects might proceed more quickly initially. This is a relatively new sector in Ireland, and the level of public opposition may increase, consequently resulting in increased planning delays. Current developer-led spatial patterns are likely to continue. This alternative does not consider the requirements of RED III (e.g., mapping of Renewable Acceleration Areas). Therefore, at this stage this alternative is not considered realistic or reasonable. A business as usual approach for renewable energy has not been brought forward for assessment.

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Alternative Consideration	Realistic	Reasonable	Viable	Implementable	Outcome
Do Something – Apply only a national target in the revised NPF.	X	X	✓	✓	Retain the Strategic renewable electricity targets for onshore wind and solar PV established by CAP at a national level only. Include the national target allocations as set out in CAP 23 within the NPF revision by the inclusion of an additional National Policy Objective indicating same. Similar to the previous option, delivery or capacity is likely to be difficult and slow, and would not be realistic or reasonable in light of CAP objectives. Regional disparities in policy implementation are likely to continue. Applying a national target alternative has not been brought forward for assessment.
Do Something – Apply regional targets in the revised NPF	✓	✓	✓	✓	Give specific policy direction to translate the national target in the Climate Action Plan to regional and local levels for onshore wind and solar PV. This approach provides the opportunity to develop a more coherent planning policy framework (national, regional, county level), meaning a better likelihood of reaching national targets more efficiently. It also provides a better opportunity to balance social, economic and environmental factors in the plan-led context. Good compliance with CAP objectives. Applying regional targets alternative has been brought forward for assessment – see Section 7.5.5.

7.4 Assessment Parameters

The approach used for assessing alternatives for the draft Plan was an objectives-led assessment. Each alternative has been assessed against a set of strategic environmental assessment objectives. The assessment compares the likely impacts in terms of the Strategic Environmental Objectives to see how alternatives perform in relation to the stated environmental objectives.

The following notation is used in the assessment tables:

Symbol	Intended Meaning
Plus (+)	Indicates a potential positive environmental impact
Minus (-)	Indicates a potential negative environmental impact
Plus/minus (+/-)	Indicates that both positive and negative environmental impacts are likely
Uncertain (?)	In the absence of further detail the impact is unclear
Zero (0)	Indicates no significant impact

Under each alternative a discussion is presented to support the assessment parameters shown and the reason for choosing the preferred alternative. Assessments include qualitative and where possible quantitative information.

7.5 Alternatives Considered

7.5.1 Balanced Regional Development

The evidence from the first census since the adoption of the NPF indicated a reasonably positive trend in the objective to match the level of population growth in the EMRA region with the two other regions – effectively a ‘50/50 growth split’. Census 2022 indicated that between 2016 and 2022, growth in the Eastern & Midland region accounted for 56% of national population growth, somewhat ahead of 2018 NPF’s projected share of 49% to 2040. This compares with approximately 70% in the previous intercensal period.

The following scenarios have been provided by the NRUP Unit (NPF Team) of DHLGH.

- Scenario 1: ‘Pro rata’ Growth.** It is proposed to target, on a pro-rata basis throughout Ireland, additional projected population growth to 2030, in line with the NPF strategy. This will effectively mean more targeted growth everywhere to 2030, including for the four regional cities. Any increase in overall population/housing targets will be broadly consistent with the 50:50 regional scenario developed in the National Planning Framework. This represents a business as usual type approach, albeit accommodating increased growth projections.
- Scenario 2; ‘Modified Pro rata’ Growth.** Given that there is significant ongoing population growth and consequent demand for housing in the Dublin and Mid-East Region which must be urgently addressed to ensure national competitiveness, and as significant investment in public transport infrastructure is planned for the Dublin Metropolitan Region, is proposed in this scenario to identify a proportion of post-2030 growth which can be aligned with major public transport investment in and around Dublin, with the remainder of the projected increase in population allocated on a pro-rata basis in line with the NPF strategy approach.

This additional element of population growth would be applied to Dublin (four local authorities) and the Mid-East local authorities (Kildare, Louth, Meath and Wicklow). This would enable strategic planning for large-scale sustainable development to commence. This is important given the longer lead-in time required to achieve master-planning and infrastructural investment to support the delivery of housing, supported by necessary associated enabling infrastructure, including social and community infrastructure to meet the needs of expanding new communities, in and adjoining the Dublin Metropolitan Region.

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In this scenario, it is proposed to leverage existing and planned public transport investment and to focus on large-scale Transport Orientated Development (TOD) opportunities on both brownfield and greenfield sites, that have already been identified, or can come forward for development in the period. This could include lands adjoining:-

- Drogheda and the railway line south (DART+ Coastal North);
- The Metrolink line to Swords;
- The railway line to Dunboyne/Pace (DART+ West);
- The railway line to Maynooth and west (DART+ West);
- The railway line to Hazelhatch (DART+ South-west);
- The City Edge lands on the Luas Red Line.

Under this alternative, the overall allocation of population/housing targets remains broadly consistent with the 50:50 regional scenario developed in the National Planning Framework.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
PR Scenario 1	+/-	+/-	+/-	0/-	+/-	+/-	+/-	+/-	0/-
MPR Scenario 2	+/-	0/-	0/-	0/-	+/-	+/-	+/-	0/-	0/-

Key: *PHH:* Population & Human Health; *BFF:* Biodiversity, Flora & Fauna; *LS:* Land & Soils/Sediments; *W:* Water; *AQ:* Air Quality; *CF:* Climatic Factors; *MA:* Material Assets; *CH:* Cultural Heritage; *LandS:* Landscape.

Assessment and Discussion:

Balanced development remains the core focus of **Scenario 1** as per current NPF. It affords the best opportunities for communities to gain equity in terms of access to infrastructure and investment which can accompany population growth in an area with positive effects for PHH and MA in the medium to long term. However, concern remains over access to adequate housing, healthcare / education and services across the three regions in the shorter term which would need to be addressed in tandem to avoid negative effects for PHH and MA. Sub-national allocations need to ensure peripheral and disadvantaged areas are not left further behind as additional population goes toward existing vibrant areas which already have the critical growth to attract investment and conversely the allocations need to protect against directing growth into already disadvantaged areas without proactively addressing provision of infrastructure and services tailored to the needs of the area in advance of the growth.

Scenario 2 represents a shift away from the current balanced regional development approach, favouring additional growth in E&M Region and Dublin along transport corridors in particular. It also introduces greenfield development back into the overall strategy, a feature that was to be avoided in the 2018 NPF. **Scenario 2** reflects both the demand for housing in the E&M region and the availability of some key infrastructure which allow for large population growth to be achieved. This has positives effects for PHH and MA however significant negatives are also likely for these two receptors as housing demand cannot keep pace with existing growth and this is only likely to worsen in the short to medium term. Other services, including water and energy are also under significant pressure with existing population demands and this can lead to indirect negative effects for W and BFF where capacity is exceeded, especially for wastewater. The inclusion of greenfield is considered negative for PHH, LS and MA as it has potential to lead to sprawl and loss of important recreation space for growing populations which will be critical for wellbeing in the short to long term.

Scenario 1 has potential for negative effects for BFF by virtue of the development needed to accommodate the additional population growth anticipated across the regions. This development will result in loss and fragmentation of habitats, disturbance of species, increased risk of pollution to air and water (with potential for negative effects for these receptors also) from emissions of nutrient and chemical pollutants associated with key services. Increased pressure from recreation is also likely as more people seek out wild and open spaces for wellbeing. Notwithstanding these negatives, the focus on existing urban envelopes and brownfield rather than greenfield sites limits sprawl and protects wild space to an extent, giving rise to some positive effect for BFF and also indirectly for LS and MA where greenfield is protected. However, it is important to note that the amount of brownfield sites available nationally is low and there are competing land requirements for other sectors such as renewables. Ireland will require more than brownfield sites in order to achieve the projected growth. Furthermore, the brownfield sites in flood zones might require restoration to provide natural flood storage.

As with Scenario 1, Scenario 2 has potential for negative effects for BFF by virtue of the development needed to accommodate the additional population growth anticipated albeit focussed along transport corridors. **Scenario 2** permits more spread into greenfield and this is likely to have additional negative effects for BFF. These areas are often at the edge of more urbanised areas and are vital as stepping stones for wildlife. The specific focus on transport corridors is also problematic for wildlife as it may lead to severance of habitats and exacerbate the existing issue of habitat fragmentation for provision of new corridors. Often areas such as rail corridors are linear stepping stones for wildlife and the delivery of this infrastructure may impact negatively on birds, bats, badger and otters along the length of the routes

Assessment and Discussion:

as vegetation is removed to accommodate these links. Increased housing development alongside such corridors would be expected to have cumulative negative effects on this already displaced wildlife. Increased residential pressures are also of concern in terms of cumulative effects. Mitigation to ensure these linear corridors are not sterilised for urban wildlife will be critical to sustainability under Scenario 2. In both scenarios there remains a focus on the main cities and with this increased urbanisation. Urbanisation is a key threat to biodiversity and is recorded as such in the monitoring of sites designated under the EU Habitats Directive. Increased urbanisation under both scenarios is likely to increase the threats and pressures on both protected and wider biodiversity as a result.

Scenario 1 will have some negative effects on LS as a result of development. The continued focus on existing urban envelopes and brownfield may result in quantities of contaminated soils requiring recovery and disposal. Capacity for dealing with this contamination was identified as an issue for the first NPF in 2018. Notwithstanding that, Scenario 1 minimises sprawl which is positive for protecting the overall soil resource. **Scenario 2** will see considerable cumulative land use change along the linear transport corridors noted. It also opens up the opportunity for greenfield development with negative consequences from loss of the soil resource.

Both **Scenario 1** and **Scenario 2** have potential for significant short term temporary negative effects as a result of construction related activities leading to pollution of surface waters, groundwaters and marine waters from release of suspended solids and chemical pollutants. There is also potential with **Scenario 2** for cumulative negative effects from concentrated development of housing concurrent with or following disturbances from implementation of the transport corridors mentioned. Increased populations in both **Scenario 1** and **Scenario 2** will put pressure on existing water and wastewater capacity. There are a number of areas nationally, as reported by the EPA, that have capacity issues leading to nutrient and chemical pollution of water bodies.

The regional balance sought for the additional population growth in **Scenario 1** is broadly positive for AQ and CF as it has potential to reduce the focus on Dublin and its hinterland as the growth centre and supports a rebalance away from historical commuter belt approach. However, to achieve this it must go hand in hand with regional economic balance or the unsustainable transport patterns will return and negative effects will follow for AQ. High density of people within the four big cities could provide financial justification for public transport thus increasing urban mobility and offering greater potential to integrate facilities such as district heating, walkways and cycleways. This can help reduce car dependency and result in direct positive impact for AQ and CF. However, temporary negative impacts for AQ are anticipated during construction phase of various development activities. Much has changed since 2018 and working from home has not only revitalised communities by allowing people to stay / return and continue working remotely but it has reduced the need for some of the unsustainable journeys of the past. Critical to the long term successes achieved so far is the full and timely roll out of broadband as intended in the National Broadband Plan. Without this industry confidence could be lost and a return to office based work identified as a necessity with negative effects from these journeys on AQ and CF. **Scenario 2** is broadly positive as it seeks to align public transport with population growth in an integrated way, reducing the need for private car journeys and car ownership for some residents. Concentrating the population growth around areas that are well serviced with public transport will help reduce car dependency and vehicular emissions, resulting in short to long term, direct positive impacts for AQ and CF. However, temporary negative impacts for AQ are anticipated during construction phase of various development activities. However, there is likely to be short to medium term negative effects if capacity on the public transport corridors cannot keep pace with population. It is noted that Luas and Dart are both implementing enhancement projects with elements including line expansions and ticketing and station enhancements. Power system upgrades will also be required. Given the often long lead in time for planning of such infrastructure and related but not dependant support infrastructure such as grid it is likely that these transport corridors may at best only come online toward the end of this upcoming cycle of the NPF. The risk of people turning to private car use in the interim may be a negative consequence for AQ and CF in the short term. The availability of renewable energy is also a consideration with both **Scenario 1** and **Scenario 2**, given the State's overall national ambition to reach climate neutrality by 2050. In the absence of sufficient grid capacity and sufficient renewables penetration onto the grid, alignment with these transport corridors would have some negative effects in the short, medium to long term, given Ireland's current pace of change in terms of reducing GHG emissions and the current grid constraints around Dublin region (e.g., EirGrid's Powering Up Dublin which will help to facilitate renewable energy connections as well as increasing grid capacity and reliability).

Scenario 1 seeks to promote viable communities across the three regions and as such has indirect positive effects for MA by ensuring investment is maintained. **Scenario 2** does seek to consolidate growth along urban corridors which is positive for MA in the Eastern and Midland Region. It is aiming to link post-2030 growth projections with the major public transport investment in and around Dublin. The aim is to target the population growth into areas where better transport connections will be available in the upcoming years. This is directly positive for PHH and MA for medium to long term as it ensures that population growth will be targeted to administrative areas of Dublin and Kildare, Louth, Meath and Wicklow to utilise the existing or planned transport infrastructure opportunities on both brownfield and greenfield sites. It will lead to more efficient use of existing or planned resources and infrastructure, potentially improving access to healthcare, education, and other essential services however in the shorter term increased pressure on existing services is more likely given that a number of key strategic plans will not yet have accounted for new ERSI figures underpinning the growth that the revision to the NPF is now considering.

Under both scenarios it is noted that rapid urban development has the potential to result in the destruction or alteration of cultural heritage sites and landscapes, eroding the historical and cultural identity of an area potentially impacting

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negatively on LandS and CH. This is likely to have negative impacts in the targeted administrative areas. Similarly, without proper planning high density development can indirectly impact the natural landscape and existing townscapes, thereby negatively impacting LandS into the long term. Under **Scenario 1** there is potential for strengthening of communities, supporting population growth across the three regions with positive effects for CH. Conversely under **Scenario 2**, the focus, even in the short term on E&M region could lead to further rural depopulation, impacting the long term sustainability of communities. Under **Scenario 2** there is also potential for cumulative change in landscape character along the transport corridors in the alternative. These include areas of architectural and archaeological heritage value and potential, including those of national as well as international importance in areas such as Dublin City and into Meath that is home to the Boyne Valley National Park and UNESCO World Heritage Site, Brú na Bóinne. There is potential for negative effects on LandS as a result of this land use change. Cumulatively the provision of housing and services in these areas will add to the potential for cumulative negative effects on CH and LandS.

Preferred Environmental Alternative and Reason for Choosing: Both scenarios continue the core principle of balanced regional development and both offer advantages albeit in different ways. In the shorter term, Scenario 2 would be the preferred environmental scenario as it puts a focus on integrated land use and transport corridors in the short to medium term where greatest demand is required and this prioritisation of corridors for development would not only deliver more housing in the short to medium terms but would also encourage modal shift, reducing car dependency and subsequent vehicular emissions. It does however come at the cost of a focus on more greenfield development and significant land use change. Conscientious and sensitive landscape planting to replace and / or enhance urban biodiversity and landscape quality along these corridors could improve outcomes relating to BFF, W and LandS in particular and this should accompany this option. It is acknowledged that large-scale public transport infrastructure in Dublin are planned and will go ahead regardless of Scenario 2 being adopted and they are likely to be a focus for residential development in any case. The advantage of Scenario 2 is that some of the developments could be brought forward through Strategic Development Zone routes (or similar) allowing the advanced planning of support services to be addressed and assessed through SEA. This would provide more certainty in planning terms.

However in the longer term, **Scenario 1** would be the preferred environmental scenario as it remains more faithful to the underpinning principle of balanced regional development. It offers greater opportunity to build on gains made since 2018 in achieving more balanced regional growth where a wider cross section of communities can play their part in achieving a more healthy, sustainable and climate-neutral Ireland with jobs and opportunities spread more proportionately. This requires a specific policy base to bring economic certainty for investment which is needed to generate sustainable communities across all three regions. Indirect benefits would also be achieved where there is reduced need for travel as more vibrant communities could flourish outside the Dublin region with services and products available closer to home. The advantage of Scenario 1 is that it provides the policy counterbalance needed to address the historic regional imbalance and this is clearly still required for the next cycle of the NPF if the imbalances are to be reduced in the longer term. Shifting focus to the Eastern and Midlands region, even in the short term is likely to reverse progress made to date on regional balance.

7.5.2 City Focused Development Scenarios

- **City Focused Development Scenario 1– Prioritisation of Cities.**

Census 2022 shows that the proportion of national population growth achieved in the five cities was 124,543 persons or just 32% of overall growth. In order to achieve the overall increase in city-based population growth, the NPF sets ambitious growth targets to enable the four cities of Cork, Limerick, Galway and Waterford to each grow by at least 50% to 2040. Census 2022 shows a very mixed performance for these regional cities—only Waterford (+12%) and Limerick (+8%) had a growth rate above the national average of 8%. Both Galway and Cork grew at a rate below the national average. To achieve the ambitious NPF growth targets to 2040, each of these cities would need to see growth rates in excess of 10% each intercensal period.

In this scenario, in the short term a greater proportion of national growth is prioritised to all five cities to strengthen ambition for city-based growth and enable a greater level of planning and development activity. The NPF Objective of targeting 50% over 2016 levels to 2040 (c.475,000 people), would be adjusted to direct a greater proportion of national growth to the five cities – c.600,000 or 65% in the short term and allow for growth at scale while providing appropriate employment, educational and health opportunities. The provision of investment would be aligned to this approach.

- **City Focused Development Scenario 2– Modified Prioritisation of Cities.**

This scenario is as per Scenario 1 above however prioritisation would be to the cities and areas within cities where there are less short term issues with capacity and / or conflict with environmental sensitivities.

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Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
CFD Scenario 1	+/-	+/-	+/-	-	+/-	+/-	+/-	+/-	+/-
CFD Scenario 2	+/-	+/-	+/-	+	+	+	+	+/-	+/-

Key: *PHH: Population & Human Health; BFF: Biodiversity, Flora & Fauna; LS: Land & Soils/Sediments; W: Water; AQ: Air Quality; CF: Climatic Factors; MA: Material Assets; CH: Cultural Heritage; LandS: Landscape.*

Assessment and Discussion:

The city-focused growth strategy in **CFD Scenario 1** is based on ambitious growth targets for the cities of Cork, Limerick, Galway and Waterford, relative to their historic growth rates (each projected to grow by at least 50% by 2040). It is intended that the ambition is supported by investment and jobs creation which would be positive for PHH giving more access to suitable housing opportunities and to jobs. However negative effects are also anticipated for communities where greenfield / infill sites are used as this would reduce the open space and recreational opportunities with negative outcomes for health. A clear recreation strategy is needed to accompany these ambitions to ensure this “softer” support is not overlooked in the city focus. Groups such as teenagers and young adults are often overlooked in such provisions, and this can lead to marginalization and anti-social behaviour issues. Negative effects are also possible for PHH where there is a lag or delay in investment / improved infrastructure. Insufficient capacity on public transport for example may necessitate additional private car journeys and the potential for impacts on AQ and HH as a result. Insufficient or inadequate water may limit investment opportunities and economic growth and poor or inadequate water and wastewater treatment can lead to negative health outcomes for communities. **CFD Scenario 2** acknowledges the limitations of the support infrastructure and seeks to prioritise areas with a demonstrated capacity for growth in the short term to allow infrastructure provision to be put in place elsewhere, prior to growth. This would have positive effects for PHH as a result. Criteria to demonstrate suitable capacity would need to be developed.

Both **CFD Scenario 1** and **CFD Scenario 2** are anticipated to give rise to negative effects for biodiversity. The increased targets are likely to result in loss of supporting natural assets such as trees and open spaces which act as stepping stones and / or linear networks. This has also to be considered in the context of cumulative effects from provision of related strategic infrastructure (transport corridors, energy infrastructure, telecoms among residential among others) leading to increased fragmentation, eroding resilience of habitats and species to survive or thrive in urban settings. Negative effects are also likely for BFF as a result of insufficient or inadequate services where population growth outstrips capacity. Wastewater is a key indicator in this regard as facilities which operate over capacity may impact negatively on water dependant habitats and species (marine, estuarine and freshwater) from nutrient enrichment. The phasing proposed in **CFD Scenario 2** recognises the need to align capacity with growth and this is positive. Notwithstanding this, increased focus on cities reduces potential for sprawl to greenfield sites outside settlement footprints or to settlement edges. Limiting sprawl has direct and indirect positive effects for BFF.

Both positive and negative effects are identified in relation to LS for both **CFD Scenario 1** and **CFD Scenario 2**. If the increased targets are focussed at brownfield sites within cities this would protect the natural soil resources and would have positive effects. Brownfield development could result in addressing past land degradation/contamination which is positive for LS. However if greenfield sites are used this would have negative effects through loss of the soil resource through soil sealing or extraction. Development on brownfield sites does however result in greater risk of encountering contaminated land and this has to be dealt with in accordance with waste management legislation which may require export for treatment, disposal and recovery (including that of critical raw materials) if indigenous capacity is not available. This issue was raised in the 2018 assessment also. As with BFF, the increased targets for cities will reduce pressure on greenfield sites outside settlements boundaries and this is positive for protection of soils more generally.

Negative effects are identified in relation to W for **CFD Scenario 1**. Higher targets may put pressure on water supply and wastewater treatment and if capacity is not available this could result in adverse effects on water quality from nutrient enrichment and / or contamination. **CFD Scenario 2** acknowledges the need for alignment of growth to capacity which is positive.

Increased targets in city areas may result in increased usage of sustainable modes of travel when available therefore capacity is a critical factor in this regard and has potential for positive effects for AQ and CF in both scenarios. However, it is not clear if this capacity or the facilities would be delivered in advance of the growth. Without capacity this is likely to drive people to private car use, especially at urban fringes. This would have negative impacts for both AQ and CF in the short to medium term under **CFD Scenario 1**. It is noted that there are many Government initiatives to encourage modal shift e.g. CAP 24 includes the transport sector framework for Avoid (reduce unnecessary journeys), Shift (to different travel modes) and Improve (national car fleet) and implementation is ongoing however transport remains a challenging sector in terms of achieving climate targets.

Positive effects are anticipated for MA under both **CFD Scenario 1** and **2** as they have potential to revitalise city areas, reduce vacancy rates, and improve local economies, contributing to the long term sustainability of city communities. However this positive effect will only be achieved where investment is provided to ensure social and economic supports are in place to support social and economic wellbeing. As noted under the alternatives for Balanced Regional Development, peripheral or disadvantaged areas in cities will become further entrenched if populations are increased without the delivery of services in advance. Retrospective provision of the services is not a sustainable approach.

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Assessment and Discussion:

Scenario 2 provides some capacity in this regard as suitability of areas can be considered and prioritised to inform where initial growth can be accommodated in the short term.

Both scenarios have potential for negative effects in relation to CH and LandS. The increased targets may necessitate higher density developments in areas with built heritage interests which can impact negatively on setting and character of an areas.

Preferred Environmental Alternative: Scenario 2 is the preferred environmental option. While both options will deliver the increased targets in the cities, the prioritisation would be to the cities and areas within cities where there are less short term issues with capacity and / or conflict with environmental sensitivities offers the best potential to avoid negative consequences on the receiving environment. Suitable selection criteria will be required to ensure a standardised approach at regional scale which can then inform the MASPs.

7.5.3 Compact Growth Scenarios

- Compact Growth Scenario 1: Increase compact growth targets for all settlements.**

Under this scenario, compact growth targets are increased for all settlements to 60% in the cities and 40% in the towns, to provide an overall target of 50% of all growth to occur in a more compact form.

- Compact Growth Scenario 2: Increase compact growth targets for towns, to match the target for cities.**

Under this scenario, the compact growth target for towns (30%) is increased to 50% to match the target for cities, giving a national target overall of 50% of all growth to occur in a more compact form.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
CG Scenario 1	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
CG Scenario 2	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-

Key: *PHH: Population & Human Health; BFF: Biodiversity, Flora & Fauna; LS: Land & Soils/Sediments; W: Water; AQ: Air Quality; CF: Climatic Factors; MA: Material Assets; CH: Cultural Heritage; LandS: Landscape.*

Assessment and Discussion:

Compact growth as a concept can have broadly positive effects for PHH, MA, LS, BFF, AQ, CF, CH and LandS by directing growth to existing urbanised areas, reducing the pressure on greenfield areas and allowing economies of scale to support key transport and social infrastructure, attracting investment and creating viable communities. Avoiding dispersed settlement patterns reduces the decline of central parts of cities and towns, regenerating and revitalising these areas which creates more liveable environments. The compact settlements can encourage more active lifestyles and improved accessibility to services and amenities, resulting in direct positive impacts for PHH for short to long term. Compact growth can lead to reuse of existing building stock which will improve the historic character and setting of heritage assets in city centres and towns.

However, there is a negative aspect to compact growth also i.e. loss or reduction in available open space for recreation (LandS, PHH effects) and for wildlife (BFF effects) in already built up areas, greater reuse of existing buildings which may disturb more biodiversity in vacant and derelict buildings or niche habitats and alteration of cultural and landscape character (LandS and CH effects) and increased pressure on services and facilities (MA and PHH effects). Compact growth can reduce pressure on soil (LS effects) resources from greenfield development but it may also increase potential for contaminated land where brownfield development is focussed. Water (W) may also benefit from compact growth where there is a shift away from one off rural housing and domestic waste water systems to mains supply but this assumes there is adequate capacity.

Government recently adopted and published the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities 2024. Although not specifically addressed in either alternative, it has been assumed for the purpose of this SEA assessment that both scenarios would implement the Guidelines in full in terms of delivering appropriate density ranges within differing settlement types. It has also been assumed that the additional steps in relation to refining densities and tailoring responses to local circumstances would be applied, having regard to the differing areas within settlements

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Assessment and Discussion:

i.e. centres, strategic regeneration areas, inner neighbourhoods, sustainable extension, and outer suburban/edge. These may warrant differing responses in terms of densities.

Notwithstanding the mitigating effect of application of the Guidelines and similar related Government policy e.g. Town Centre First going forward, this does not address historic patterns of development which will have legacy effects for communities around the country and may impact on achieving the proposed targets under both scenarios in the short to medium term. Accommodating the proposed targets under Scenario 1 or 2 is likely to be challenging for cities and towns, particularly in relation to access to social infrastructure (e.g. health, housing, recreation) which may be lacking in target areas. A strategy to address this is needed in advance of increased targets being achieved to avoid creating new areas of disadvantage or embedding older ones further. Such a strategy would require consideration of all life stages to avoid disadvantage. This may include modular approaches to acknowledge differing needs at different life stages and social and recreational infrastructure for teens / young adults and older people which are often lacking in compact scenarios.

Preferred Environmental Alternative: Scenario 1 is the preferred environmental alternative. The compact growth targets have only recently become embedded in county and city development plans. This represented a new approach for most LAs and the effectiveness of the targets have yet to be fully confirmed. This should be established before increasing the targets to ensure it represents a sustainable approach.

Mitigation: Ensure social infrastructure is considered in RSES and CDPs which addresses provisions for all life stages as part of a commitment to sustainable communities.

7.5.4 Renewable Energy Targets

7.5.4.1 National versus Regional Scale

One alternative was identified as reasonable, realistic, viable and implementable for the renewable energy targets (RET). This was Do Something wherein regional targets are addressed within the revised NPF. The scenarios possible under this alternative include:

- **RET 1:** The revised NPF provides national policy and a national target and in addition defines regional targets to be applied by the regional authorities.
- **RET 2:** The revised NPF provides national policy and a national target and in addition includes a specific NPO directing the Regional Authorities to develop regional and county level targets.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandSeaS
RET 1	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
RET 2	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-

Key: *PHH:* Population & Human Health; *BFF:* Biodiversity, Flora & Fauna; *LS:* Land & Soils/Sediments; *W:* Water; *AQ:* Air Quality; *CF:* Climatic Factors; *MA:* Material Assets; *CH:* Cultural Heritage; *LandSeaS:* Land/Seascape.

Assessment and Discussion:

The national targets for both onshore wind and solar have been identified in various policy documents, notably the CAP 23 and its successor. As such both RET 1 and RET 2 would contribute to achieving the objective and as such both would have positive long term effects for CF as they will move Ireland toward the overall national climate objective.

RET 1 and **RET 2** both establish a hierarchy of delivery from national to regional and on to county and local level for renewable energy with indirect positive effects for PHH and MA arising from orderly and sequential planning for land uses which are considered vital to achieving the national climate objective.

The key difference between **RET 1** and **RET 2** lies in the level of governance at NPF scale. With RET 1 the NPF includes the national RET but goes further to actually identify and apportion targets at the regional scale. It can then be assumed that the Regional Authorities will have autonomy to achieve those targets. With RET 2 the NPF includes the national RET

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Assessment and Discussion:

and requires the Regional Authorities to implement and achieve the target but leave the allocations to be identified and allocated to the regional authority tier.

RET 1 provides a high level of controls in terms of both identifying opportunity and allocating specific targets to each regional authority. Inclusion of regional targets within the NPF signals a coordinated and consistent framework which has considered, albeit at a macro scale, how the national targets can be delivered. Such an approach does not remove the need or expectation that further detail analysis to take place at regional scale but provides more certainty on the likelihood that targets will be delivered at the regional . This type of approach allows for a consistency in approach and expectation and as such is more plan driven. Further guidance may however be required to ensure consistency is maintained at lower tiers. The RET 1 scenario is expected to have indirect positive effects for all environmental receptors as it provides for orderly planning, consistency in approach and efficiencies to be achieved which offer the best opportunity for timely achievement of targets. Notwithstanding this development and construction of projects eventually brought forward under the updated planning framework can be anticipated to have potential short to medium term negative impacts across environmental indicators apart from CF as a result of construction related activity e.g. release of dust, increased construction traffic and related air emissions, sealing of soils with potential for increased flood risk, deterioration in water quality from suspended solids and / or chemical pollution, visual intrusion, noise, loss of habitats and disturbance of habitats and species. In the medium to long term there is also potential for changes to landscape character and visual intrusion on sensitive receptors for delivery of this infrastructure.

RET 2 provides a lower level of control in terms of allocating specific targets to each regional authority. With this approach, the national target would have to be allocated on a regional level through another mechanism. There is less opportunity for efficiencies or consistency to be achieved. Some areas of the country may be more proactive than others leading to an imbalance in delivery in some regions. Accountability would also be more difficult to achieve below the national scale leaving limited opportunities for remedial action if the national target is not being achieved. While the overall effects of delivering the necessary infrastructure are similar for environmental receptors as RET 1, the potential for delays and uncoordinated assessments / opportunities has potential for additional negative effects for all receptors. Speed of delivery may impact on CF if achieving targets is delayed with indirect effects for PHH, BFF and MA from the longer term climate risks that come with delays. Differing approaches to assessment e.g. mobile species such as birds, risks poor outcomes for BFF especially where species cross regional boundaries and may be accounted for in different ways. Opportunities for consideration of cumulative effects are also reduced where each region is working autonomously.

Preferred Environmental Alternative: **RET 1** is the preferred alternative. The implementation of a coherent plan led approach to planning for onshore renewables has the greatest potential to improve the environmental outcomes across all indicators.

Mitigation: The regional assemblies need to apply robust methodologies with environmental protection at their core when planning for delivery on regional targets. Consistency across the regions is required. This will enable the required renewable electricity capacity (climate mitigation) to be installed while minimising environmental impacts.

7.5.4.2 Spatial Allocations

Following on from the above preferred alternative to allocate regional RET, consideration was given to how this could reasonably be achieved. The comparison of scenarios included the following interconnected considerations:

Timely Deliverability – The urgency of responding to the climate crisis in accordance with commitments to international agreements and legally-binding targets puts an emphasis on deliverability. The CAP calls for 80% renewable penetration on the electricity grid by 2030, which is extremely demanding. Deliverability includes both technical aspects (including the ability to connect the electricity grid) and environmental/ planning aspects (including the ability to secure planning consent).

Just Transition (Achieving Regional Balance) – Deployment of onshore renewables has so far followed unequal patterns of distribution for both wind and solar energy. A more equitable distribution will address the reasonable social demand for equity from one region to another. It will respond to the principle of a Just Transition, whereby all areas share the advantages and disadvantages of the transition away from fossil fuels.

Grid Connection Availability – This is a pragmatic consideration. In simple terms, where can new renewable projects be most easily ‘plugged in’ to the national grid? EirGrid’s ‘Shaping Our Electricity Future’ (Version 1.1, 2023) examined various alternative scenarios, and aims to connect more renewables where grid capacity is already available or can be enabled without requiring major new grid expansion.

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Matching generation with location of energy demand – Ireland's largest energy demand is currently biased to the east of the country, driving as well as following settlement and economic patterns. Wind projects are mainly weighted toward counties on the Atlantic seaboard (with some exceptions). Better matching of supply and demand will bring efficiency and reduce energy losses in transmission.

Environmental protection: it will be preferable to avoid pressures on environmental sensitivities, including sensitive habitats and species, waterbodies, etc. and the amenities of people and communities. Spatial planning methods are currently in use at county level to guide development towards more suitable areas (where there are fewer environmental sensitivities). The CAP envisages this framework being strengthened at national, regional and local level for a more consistent approach nationwide

Five possible scenarios to regional allocations were considered as follows:

- **Spatial 1 Maintain Current Pattern** - Allocate regional target to reflect current patterns of wind farms and emerging pattern of solar farms. Assume regional share to remain steady as overall capacity grows.
- **Spatial 2 Geospatial** - Allocate regional capacity based on theoretical availability of land area (i.e. lands with fewer environmental constraints and sensitivities).
- **Spatial 3 Grid-led** - Allocate regional capacity based on where projects can be most quickly connected in alignment with grid availability (which relates to both grid strength and energy demand among other factors).
- **Spatial 4 - Even Growth Approach** The gap between current level of renewable electricity deployment and the capacity required by 2030 is filled equally by each of the three planning regions.
- **Spatial 5 Balanced Approach** (Combination of Spatial Alternative 2, 3 and 4) - Balancing of the above alternatives Spatial 2, 3 and 4 by applying a judgement of what represents the most achievable, equitable, and environmentally acceptable allocation that will meet CAP 2023 requirements for 2030.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandSeaS
Spatial 1	-	-	-	-	-	+/-	-	-	-
Spatial 2	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
Spatial 3	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
Spatial 4	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
Spatial 5	+	+	+	+	+/-	+	+/-	+	+/-

Key: *PHH:* Population & Human Health; *BFF:* Biodiversity, Flora & Fauna; *LS:* Land & Soils/Sediments; *W:* Water; *AQ:* Air Quality; *CF:* Climatic Factors; *MA:* Material Assets; *CH:* Cultural Heritage; *LandSeaS:* Land/Seascape.

Assessment and Discussion:

Spatial 1 assumes current patterns of wind and solar would be maintained to achieve the allocated targets. However, it is noted that there is currently a regional imbalance in renewable energy generation. Southern and Northern and Western regions have developed much more wind capacity, with relatively little in Eastern & Midlands Region. This is partly due to wind regimes and spatial patterns (including settlement, land-use), but also influenced by inconsistent planning policies at local authority level in the absence of a national spatial plan. Generation capacity (largely in the west and south) does not match location of energy demand (which is strongest in the east). Continuing the current renewable energy development model which has been the norm for the past 20 - 25 years is unlikely to deliver the infrastructure that is required to achieve our 2030 targets in a sustainable and equitable manner.

The uncoordinated approach that has developed over time has potential for long term negative impacts for all environmental receptors resulting from unsustainable development patterns. Of particular note is the impact on landscape and visual receptors. Poor siting and cumulative effects of uncoordinated allocation can significantly alter landscape characters and impact negatively on sensitive views as well as impacting negatively on sensitive receptors such as surrounding residential property and cultural heritage (CH) features. This has indirect negative effects also for PHH from encroachment on residential dwellings and other sensitive receptors, loss of visual amenity, visual intrusion and noise / EMF disturbance. BFF can be impacted by cumulative loss and disturbance of habitats and species, species mortality associated with collision risk, deterioration in environmental quality e.g. air, water. Other negative effects include changes to drainage patterns, loss of agriculturally rich lands and other sensitive lands e.g. carbon sequestration or carbon storage soils negatively impacting W and LS. The uncoordinated approach also has broader negative effects associated with over 'saturation' – in other words, some counties having significant concentrations of wind farms than others leading to cumulative negative effects at the county and local level.

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Assessment and Discussion:

Spatial 2 proposes a geospatial approach to identification of regional targets. This uses GIS to examine availability of land at a national level in relation to deployment of wind and solar resource and allocate regional capacity based on theoretical availability of land area i.e. lands with fewer environmental constraints and sensitivities e.g. European sites UNESCO sites, proximity to residential receptors. Using the geospatial approach consistently across all regions, the land theoretically availability for additional wind and solar projects can be identified. The theoretical capacity for renewable energy can then be assessed using standard conversion factors. An analysis using this approach has been carried out and is presented in **Appendix D**. For Wind, the capacity availability in the Eastern and Midland Region is the highest (followed by the Southern Region and then Northern and Western Region). For Solar, the capacity availability in the Southern Region is highest, compared with Eastern and Midland and Northern and Western regions (both at a similar level). This approach would result in fewer development applications in environmentally sensitive areas and therefore result in a positive outcomes for most of the indicators but particularly CF and MA (achieving climate targets), PHH (maintaining distance from sensitive receptor), BFF (avoidance of European and nationally designated sites, consideration of collision risk), LS and W (avoiding areas of flood risk or ecological sensitivity) CH (avoiding areas of cultural heritage sensitivity or protection), LandS (sensitive siting of infrastructure). Notwithstanding this the introduction of this infrastructure has potential for short to long term negative effects on the receiving environment though alteration of landscape character and changes to land use as well as typical construction impacts to all environmental receptors. The requirement for grid strengthening to accommodate the developments is also a factor as in some cases new or enhanced grid may be needed to align with the developments delivered impacting negatively on BFF (collision risk) and LandS (visual intrusion) in particular.

Spatial 3 proposes a grid led approach to identification of regional targets. This uses plans from EirGrid in relation to national grid capacity including existing capacity availability and objectives for grid strengthening to allocate targets. EirGrid's 'Shaping Our Electricity Future (1.1)', includes a spatial indication of grid capacity in 2030 for future renewable electricity connections. This can be allocated into the three planning regions. This scenario indicates EirGrid's technical perspective on where renewable energy can be connected to the grid to meet 80% RE penetration by 2030. It does not consider project delivery for the renewable generation (wind and solar farms). An analysis using this approach has been carried out and is presented in **Appendix D**. Under this approach, the share of additional capacity (between now and 2030) in both Eastern and Midland and Southern regions would be highest, significantly more than in the Northern and Western Region. This approach is relatively blind as to good site and route selection siting of renewable energy projects to avoid the negative effects identified in spatial 2 and as such a '+/-' score is applied to all receptors. There would however be less need for new grid lines/ strengthening, which might reduce impacts on landscape (etc.). Because CAP objectives for 2030 would be met efficiently, this is given a positive score.

Spatial 4 proposes an Even Growth Approach wherein the gap between current level of renewable electricity deployment and the capacity required by 2030 is filled equally by each of the three planning regions. This would entail an even numerical distribution of the c. 4.4 GW of growth needed between 2022 and 2030. This approach would reflect 'burden sharing' of the externalities of new wind and solar projects. This would address social and political equity as opposed to being driven by technical or environmental inputs. The approach would not take into account the current patterns for wind energy projects or the relatively weak level of planning activity for solar projects in the northern and western region (which appears to be a function of economic viability, relating to both solar irradiation levels and size of landholdings). This approach would not take into account environmental parameters or siting and would not take into account grid conditions or the need for grid improvements. The issues identified for environmental receptors under Spatial 2 and 3 would therefore be relevant here and as such '+/-' score is applied across all indicators.

Spatial 5 proposes a balancing of the above alternatives Spatial 2, 3 and 4 applying a judgement of what represents the most achievable, equitable, and environmentally acceptable allocation that will meet CAP requirements for 2030. The balanced approach includes for consideration of social and environmental parameters while still meeting CAP requirements for 2030. While some negative effects are still anticipated from the delivery of the infrastructure, this options presents the best environmental option in terms of applying the mitigation hierarchy from the earliest opportunity i.e. avoidance.

Preferred Environmental Alternative: Spatial Alternative 5 (Balanced Approach) is selected as the preferred alternative. It reflects a balancing of the above factors (Spatial 2,3 and 4) and applying a judgement of what represents the most achievable, equitable, and environmentally acceptable allocation that will meet CAP 2023 requirements.

The overarching global environmental goal of climate mitigation is what is driving the CAP process. The approaches that improve deliverability will lead to faster reduction in GHG emissions. This needs to be balanced with protection of local environmental attributes. The geospatial approach involves using Geographical Information Systems (GIS) to combine available information on settlement patterns, geographical features, environmental sensitivities and infrastructure (including existing renewable projects). While conducted at a high level, this approach illustrates the relative availability of land in the three regions for additional wind and solar projects, taking into account environmental parameters.

It is notable that Spatial 2 (Geospatial) and Spatial 3 (Grid-led) both result in a similar distribution of future growth in wind energy. This alignment points towards co-benefits of efficient grid connections and delivery of projects on lands that create fewer conflicts with sensitive environmental areas. This is a more rational and plan-led approach compared with Spatial 4 (even growth).

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Assessment and Discussion:

Under Spatial 5, wind allocation is weighted towards Eastern and Midland region; the assessment of grid capacity and land availability support this approach. This represents a more plan-led approach than would have applied up to now. For the other two regions, the proportional allocation represents a compromise between the factors of grid planning, geospatial and 'even growth' approaches.

Applying the allocations for growth as per the draft NPF, the final wind generation capacity across the three regions in 2030 does approach a more balanced spatial arrangement, albeit still skewed to southern and northern and western regions. The solar capacity is largely delivered in Eastern & Midlands and Southern regions, with a c. 11% contribution from the Northern and Western areas.

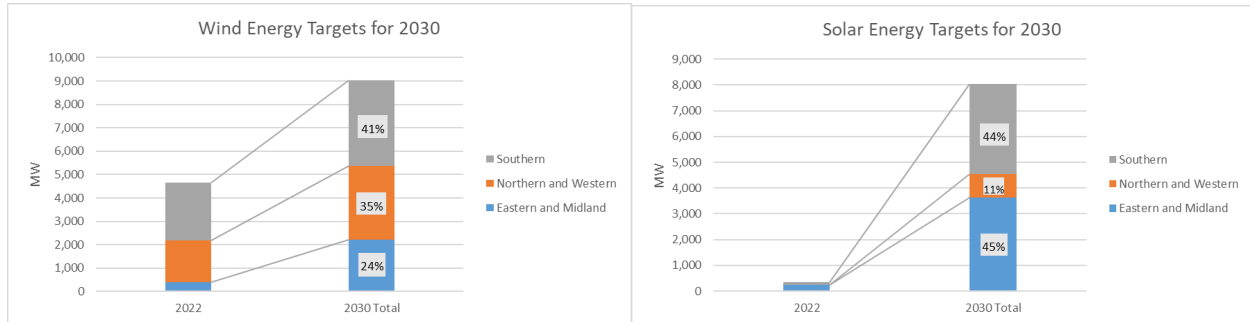


Figure ** above illustrates the trajectory for overall allocation of renewable energy generation capacity in the period from 2024 to 2030. This illustrates the significant scale of growth envisaged under the NPF. The perspective for wind energy is to achieve better regional balance, whereas the regional balance for solar energy is less even.

8 ASSESSMENT OF THE DRAFT FIRST REVISION TO THE NPF

8.1 Introduction

The purpose of this section of the Environmental Report is to evaluate as far as possible the environmental effects of implementing the draft first revision to the NPF and to set out measures envisaged to prevent, reduce and as far as possible offset any significant adverse effects on the environment. The assessment process has been an iterative one between the SEA team and the NPF team.

The approach used for assessing the draft first revision to the NPF has been broadly an objectives-led assessment. Changes to the national planning objectives from the NPF 2018 have come in the form of modifications to wording, deletions of objectives and addition of new objectives. Each change to an NPO has been assessed against a set of strategic environmental assessment objectives (SEOs); refer to **Chapter 6** for details. The assessment identifies likely significant effects (positive and negative) with reference to achieving the identified SEO. The assessment is reported in the form of a matrix assessment using the following symbols:

Symbol	Intended Meaning
Plus (+)	Indicates a potential positive environmental impact
Minus (-)	Indicates a potential negative environmental impact
Plus/minus (+/-)	Indicates that both positive and negative environmental impacts are likely
Uncertain (?)	In the absence of further detail, the impact is unclear
Zero (0)	Indicates no significant impact

Under each assessment matrix, a discussion is presented to support the assessment shown. Not all aspects of the draft first revision to the NPF are suitable for detailed assessment as they may relate to administration issues, coordination or data gathering, etc. In these cases, a qualitative statement has been made to describe how the objective might support the overall preferred scenario approach.

It is noted that as this is a revision to the NPF and much of the assessment and mitigation has already been undertaken to inform the current NPF. As such, while the focus of this assessment is on proposed changes to the NPOs, the assessment also considers the broader policy base for in each chapter in the context of changes that have occurred in the interim in terms of legislation, policy and the status of the receiving environment.

Policies which have not changed at all in the draft revision are highlighted in the tables in green, those which have been deleted are in grey with strike-through and new wording or new NPOs are shown in red text.

8.2 Assessment Parameters

Within the current scope of this SEA, temporary impacts have not been assessed. *Temporary impacts* arising from the draft first revision to the NPF and proposals contained therein would be associated with construction phase, however, no specific location or design parameters are addressed at this strategic level. *Permanent effects* are addressed in the assessment which follows.

The primary effect of the draft first revision to the NPF is to guide and deliver sustainable land use planning. Many of the policies under consideration will have *direct* impacts on population and material assets as a result. However, a number of the policies and policy actions also have the potential to impact on other environmental receptors both directly and indirectly. These *secondary and indirect* effects have been taken into account in the assessment which follows.

In line with the SEA Directive, short, medium and long-term impacts (including reference to secondary, cumulative, synergistic, permanent and temporary, positive and negative effects) have been considered

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during the assessment. For the purpose of the SEA, a short-term horizon of 2030, a medium-term horizon of 2030 to 2050 and a long term horizon of beyond 2050 have been considered.

Cumulative effects arise for instance where several developments may each have an insignificant effect but together have a significant effect or where several individual effects of the draft first revision to the NPF have a combined effect. *Synergistic effects* interact to produce a total effect greater than the sum of the individual effects so that the nature of the final impact is different to the nature of the individual impact. Cumulative/synergistic impacts are also addressed in the assessment that follows.

8.3 Assessment of Preferred Scenario

8.3.1 Chapter 1 – The Vision

The changes within Chapter 1 relate to updating supporting text to reflect the current timeline and it updates references to related policies and drivers such as the Climate Action Plan (CAP) 2023 and CAP24. The vision sets out the emerging strategy for the first revision to the NPF i.e. that it is not proposed to make substantial changes to the overall ambition and strategy of the Framework. The core objectives of balanced regional development and compact growth are proposed to be maintained, including the objective of delivering 50% of future population growth in the Northern and Western and Southern Regions combined, to act as a counter-balance to the Eastern and Midland Region with more targeted growth everywhere to 2030, including for the four Regional Cities as key elements of strategy.

The broad contents of Chapter 11 from the first NPF has also been merged with Chapter 1 of the draft first revision to the NPF including updated information on the statutory environmental assessments being carried out. The overarching environmental objective, (previous NPO 75), has now been brought forward into chapter 1, setting the environmental tone from the outset of the document.

NPO	2018 Objective	2024 Objective
1	Ensure that all plans, projects and activities requiring consent arising from the National Planning Framework are subject to the relevant environmental assessment requirements including SEA, EIA, and AA as appropriate.	Ensure that all plans, projects and activities requiring consent arising from the National Planning Framework are subject to the relevant environmental assessment requirements including SEA, EIA, SFRA and AA as appropriate.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 1	0	0	0	0	0	0	0	0	0

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

Assessment and Discussion:

While it is acknowledged that environmental assessment processes are legislated for, it is also acknowledged that the requirement is often misunderstood and can be overlooked by those undertaking development who are not fully familiar with the breadth or debt of legislation that may be relevant. This is particularly important in the context of Appropriate Assessment process which refers to any plan or project and sets no thresholds. The function of this objective was as mitigation for the first NPF to clearly set out the intention to implement these statutory requirements from the top of the planning hierarchy, normalising the expectation that, as a minimum, screening for the need for SEA, EIA and / or AA is required. The SFRA has noted in its assessment that the overarching objective as previously written did not reference flood risk assessment.

The supporting text for this NPO is also considered important as it includes a wider consideration than purely statutory reporting. This is particularly important where planning applications do not require mandatory EIA. In these cases there is still potential for environmental and ecological effects which need to be addressed in order to achieve proper planning and sustainable development outcomes. It is becoming more usual for

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Assessment and Discussion:

planning applications for projects falling outside EIA to include supporting environmental reporting to cover key project issues. This has resulted in the preparation of Environmental Reports and Ecological Impact Assessments (EclA) with relevant and proportionate information to help inform decision making. These and other similar tools can be used by planning authorities to assist in development consenting. In Northern Ireland, for example a Biodiversity Checklist¹¹⁴ approach is used for any projects seeking planning consent and it is considered that a similar approach could be helpful for Ireland also.

Mitigation Proposed:

- **NPO 1:** The NPO should be expanded to reference Flood Risk Assessment. **This mitigation has now been integrated into the final draft NPO.**
- **NPO 1:** The previous supporting text should be reinstated with minor amendments as it acknowledges the need for other non-statutory assessments to support environmental and ecological reporting. This is particularly important for ecology as Ecological Impact Assessments (EclA) inform statutory assessment such as EIA and NIS and other planning decisions which may not require full EIA. **This mitigation has now been partially integrated into the final draft NPO.**

At the project level, all applications for development consents for projects emanating from any policies that may give rise to likely significant effects on the environment will need to be accompanied by one or more of the following, as relevant:

- Ecological Impact Assessment Report (EclA) (including a biodiversity checklist tool or similar, if deemed relevant and proportionate);
- Environmental Report if deemed relevant and proportionate;
- Water Framework Directive (WFD) Assessment of projects *if deemed relevant and proportionate*;
- Environmental Impact Assessment Report (EIAR) if deemed necessary under the relevant legislation (statutory document); and
- Natura Impact Statement (NIS) if deemed necessary under the relevant legislation (statutory document).

8.3.2 Chapter 2 – A New Way Forward

Chapter 2 of the draft First Revision to the NPF addresses the spatial strategy for population distribution in the context of the three regions, the cities and the rural fabric. The chapter sets out how population growth will be distributed according to balanced regional growth and how compact growth is to be achieved in light of the ESRI analysis of the updated CSO 2022 census figures. The chapter confirms much of the NPF 2018 strategy will remain in place e.g. 50% growth in the Eastern and Midlands Region and 50% across the Southern and Northern and Western regions to achieve balanced regional development, compact growth focussed at existing settlements with a particular focus on the five cities of Dublin, Cork, Galway, Waterford and Limerick.

NPO Ref.	2018 Objective	2024 Objective
2	The projected level of population and employment growth in the Eastern and Midland Regional Assembly area will be at least matched by that of the Northern and Western and Southern Regional Assembly areas combined.	No change
3	<p>Eastern and Midland Region: 490,000 - 540,000 additional people, i.e. a population of around 2.85 million;</p> <p>Northern and Western Region: 160,000 - 180,000 additional people, i.e. a population of just over 1 million;</p>	<p>Eastern and Midland Region: approximately 470,000 additional people between 2022 and 2040 (c. 680,000 additional people over 2016-2040) i.e. a population of almost 3 million</p> <p>Northern and Western Region: approximately 150,000 additional people between 2022 and 2040</p>

¹¹⁴ <https://www.daera-ni.gov.uk/articles/biodiversity-checklist>

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NPO Ref.	2018 Objective	2024 Objective
	Southern Region: 340,000 - 380,000 additional people, i.e. a population of almost 2 million.	(c. 210,000 additional people over 2016-2040) i.e. a population of just over 1 million; Southern Region: approximately 330,000 additional people over 2022 levels (c. 450,000 additional people over 2016-2040) i.e. a population of just over 2 million.
4e	Eastern and Midland Region: around 320,000 additional people in employment, i.e. 1.34 million in total; The Northern and Western Region: around 115,000 additional people in employment, i.e. 450,000 (0.45m) in total; The Southern Region: around 225,000 additional people in employment, i.e. 880,000 (0.875m) in total	Deleted
4	A target of half (50%) of future population and employment growth will be focused in the existing five Cities and their suburbs ¹² .	No change
5	The regional roles of Athlone in the Midlands, Sligo and Letterkenny in the North-West and the Letterkenny-Derry and Drogheda-Dundalk-Newry cross-border networks will be identified and supported in the relevant Regional Spatial and Economic Strategy.	The regional roles of Athlone in the Midlands, Sligo and Letterkenny in the North-West and the Letterkenny-Derry and Drogheda-Dundalk-Newry cross-border networks will be supported in the relevant Regional Spatial and Economic Strategy and in Regional Enterprise Plans.
6	Accessibility from the north-west of Ireland and between centres of scale separate from Dublin will be significantly improved, focused on cities and larger regionally distributed centres and on key east-west and north-south routes.	No change
7	Deliver at least 40% of all new homes nationally, within the built-up footprint of existing settlements ¹⁷ . Footnote 17- This means within the existing built-up footprint of all sizes of urban settlement, as defined by the CSO in line with UN criteria i.e. having a minimum of 50 occupied dwellings, with a maximum distance between any dwelling and the building closest to it of 100 metres, and where there is evidence of an urban centre (shop, school etc.).	Deliver at least 40% of all new homes nationally, within the built-up footprint of existing settlements and ensure compact and sequential patterns of growth. ¹³ Footnote 13- This objective relates to all settlements defined as a settlement by CSO. For the purposes of NPO 7, 8 and 9, the built-up footprint is defined as the area given over to urban land uses (i.e. artificial surfaces relating to urban land uses). The built-up footprint shall be clearly defined for each settlement on the land-use zoning map as part of the statutory plan making process.
8	Deliver at least half (50%) of all new homes that are targeted in the five Cities and suburbs of Dublin, Cork, Limerick, Galway and Waterford, within their existing built-up footprints ¹⁸ . Footnote 18- On the basis of National Policy Objective 2a, this effectively targets 25% of all new homes nationally within the five cities and their suburbs as defined by the CSO in the Census of Population.	No change in the policy but the footnote has been removed.
9	Deliver at least 30% of all new homes that are targeted in settlements other than the five Cities and their suburbs, within their existing built-up footprints ¹⁹ . Footnote 19- On the basis of National Policy Objective 2a, this effectively targets 15% of all new homes nationally. Individual or scheme homes	No change in the policy but the footnote has been removed.

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NPO Ref.	2018 Objective	2024 Objective
	delivered outside the CSO defined urban settlement boundary are classed as greenfield.	
10	N/A	NEW: Deliver Transport Orientated Development (TOD) at scale at suitable locations, served by high capacity public transport and located within or adjacent to the built up area of the five cities or a metropolitan town.
11	N/A	NEW: Planned growth at a settlement level shall be determined at development plan-making stage and addressed within the objectives of the plan. The consideration of individual development proposals on zoned and serviced development land subject of consenting processes under the Planning and Development Act shall have regard to a broader set of considerations beyond the targets including, in particular, the receiving capacity of the environment.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 3	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 1c Deletion	?	?	?	?	?	?	?	?	?
NPO 5	+	0	0	0	0	0	+	0	0
NPO 7	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 8	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 9	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 10	+/-	0/-	0/-	0/-	+/-	+/-	+/-	0/-	0/-
NPO 11	+	+	+	+	+	+	+	+	+

Key: PHH: Population & Human Health; BFF: Biodiversity, Flora & Fauna; LS: Land & Soils/Sediments; W: Water; AQ: Air Quality; CF: Climatic Factors; MA: Material Assets; CH: Cultural Heritage; LandS: Landscape.

Identification of Key Impact Pathways

Key Impact Pathways for Chapter 2 NPOs:

- PHH: The projected increase in population growth across all three regions has the potential to negatively impact on PHH as a result of insufficient capacities in water, wastewater and utilities. For example, the EPA reports that over half of Ireland's wastewater discharges are not meeting EU standards set to protect the environment; in addition, raw sewage continues to be discharged from 26 towns and villages, albeit with Uisce Éireann committing to eliminating such discharges by 2025 from the majority of these.¹¹⁵ There are also urban areas which have treatment in place but it is inadequate and which are classed as Priority Urban Areas. Population increases also require in tandem education and health services in particular they are linked to health outcomes.
- BFF: The proposed strategy to accommodate growth in population across the regions has potential for impacts to BFF as a result of deterioration in environmental quality e.g. water quality from construction activities and as a result of insufficient capacity in services such as wastewater – mentioned above. The population growth is also likely to result in the gradual erosion of habitats, disturbance and loss of species and interruption of migration routes as a result of development and recreational pressures. This is particularly important in the context of the policy of compact growth where small pockets of open area,

¹¹⁵ EPA Press Release (October 2023). Available at: <https://www.epa.ie/news-releases/news-releases-2023/uisce-eireann-must-use-its-new-investment-plan-to-end-pollution-of-our-rivers-and-coastal-waters-from-waste-water.php#:~:text=Over%20half%20of%20Ireland's%20waste,and%20villages%20with%20no%20treatment.>

Identification of Key Impact Pathways

mature trees and linear networks are being eroded in built up areas for residential development and transport corridors leading to a loss of stepping stones and networks to support the movement and distribution of flora and fauna. Areas which have a function support role for resting, feeding, nesting are also under pressure from compact growth policies.

- **LS:** The proposed strategy focusses on infill development and there is a potential impact pathway with regard to contaminated lands, especially where ports and former industrial and brownfield sites are included. Disposal of contaminated soils can be problematic. In addition, contaminants may be mobilised leading to further contamination of soils and groundwater. There is potential for positive effects by moving the focus from greenfield to infill and brownfield development as this protects agricultural land and wild areas from urban developments. The ongoing sealing of soils also has potential for negative effects where it exacerbates flood risk.
- **W:** As with BFF, the proposed strategy to accommodate growth has the potential to impact on water quality (surface and groundwaters) as a result of construction activities such as releasing suspended solids, chemical pollution etc. and operational impacts to water quality from inadequate drainage and insufficient treatment of wastes. Changes in hydro-morphology and blocking of fish passages are also impact pathways associated with accommodating additional population growth.
- **AQ:** The proposed strategy has potential for long term positive impacts on AQ where greater focus can be achieved on public transport and active travel but in the shorter term, the lack of sufficient public transport / active travel routes will result in continued private car use, often burning fossil fuels. There is also likely to be increased dependence for heating on fossil fuels until sufficient capacity is available in renewables. Continued reliance on fossil fuels for heating and transport will result in deterioration of air quality from generation of particulate matter (PM10 and PM2.5) and release of polluting substances such as NOx and SOx resulting in direct impacts on AQ and indirect impact for PHH and BFF where species may be sensitive to nitrogen pollution. Ongoing construction also has the potential to negatively impact AQ and PHH from release of dust and potentially other polluting emissions.
- **CF:** The increase in population will result in direct and indirect increases in GHG with negative effects on CF. Ireland is already missing key climate targets and despite the publication of the Climate Act 2021 as amended and the annual updates to the Climate Action Plan (most recently 2024) the EPA still note that per capita emissions need to reduce significantly. At current per capita emission levels, each additional 500,000 people would contribute an additional 6 million tonnes of CO₂eq annually. Two key sectors which remain challenged are identified as waste and transport, both of which would be impacted by increased population growth. Loss of carbon sinks for development land and emissions of greenhouse gases from construction and operational activities (building material, transport, processes) are also potential impact pathways.
- **MA:** The increase in population predicted in Chapter 2 has potential to impact on greenfield lands for delivery of additional homes, notwithstanding the focus on compact growth. Furthermore, the increased population adds to the unsustainable use of natural resources, generation of wastes and need for capacity in services to accommodate the growth sustainably e.g. broadband, energy, waste, housing, water and wastewater, education and healthcare.
- **CH:** The increase in population predicted in Chapter 2 relates to loss and disturbance of known and unknown archaeology and built heritage and the impact on the landscape character and curtilage of built heritage features as a result of wider development.
- **LandS:** Development, even compact development has potential to impact on visual receptors by changing character of an area or interrupting important views. This is dependent on the location, nature and scale of development. Impacts can occur in urban areas such as Dublin city where historical landscape of Georgian Dublin may be iconic and similarly in rural areas where views may frame landscape character.

Assessment and Discussion:

While the NPF revision holds firm on the overall framework put forward in 2018, much has changed in the intervening 5 years. Government level engagement and commitment in terms of climate has significantly increased, Government has, to a degree recognised the inter-related crisis for biodiversity and climate, the Covid 19 pandemic has fundamentally altered the way we work and live, and the housing crisis, which existed entering the 2018 cycle of the NPF, has steadily worsened through a combination of internal and

Assessment and Discussion:

external drivers. Many of the revisions proposed in Chapter 2 (and other chapters throughout the proposed first revision to the NPF) are a planning response to these issues.

The key revisions in Chapter 2 relates to increased population projections derived from the Economic and Social Research Institute (ESRI). The projections translate into more people to be accommodated into the NPF framework of balanced regional development and compact growth. There is a greater focus on directing people into the existing built up footprint of settlements to optimise compact growth targets and this is supported by a new policy seeking to optimise growth along transport corridors where population increases at scale can be serviced by good transport links. Lessons are also reflected in new policy that ensures flexibility is not removed at lower tiers of planning by overly prescriptive targets - sustainable development should take place when the opportunity arises.

The revisions proposed for **NPO 3** underpin much of the assessment. Direct positive effects are anticipated for PHH and MA in the medium to long term as NPO 3 is planning for the expected increase in population evidenced by demographic and econometric modelling, albeit acknowledged that the figures will be dynamic over time. This in turn ensures that the increasing population can be directed to areas where consolidated growth can be accommodated and where integrated services can be directed, optimising existing infrastructure and infill opportunities. A broader, indirect positive effect can be anticipated for other receptors over the medium to long term as a result of this forward planning approach, notably BFF, LS and W, as it reduces the risks of unintended pollution from inadequate service provisions in wastewater in particular. Forward planning also affords the greatest opportunity to maximise use of the mitigation hierarchy i.e. avoidance of impacts as the first tool of mitigation, which is beneficial for all the environmental receptors as all have the potential for impact at the project planning and delivery level. Time to carry out robust feasibility, constraints, route / site selection and statutory environmental assessments can improve project level outcomes for all receptors and contributing positively to achieving the stated SEOs.

In the short to medium term however the outlook is poorer. Population growth is already outstripping pace of delivery of supporting infrastructure across health, education, welfare, housing, services including water, wastewater, energy, transport and broadband among others. This constrains the ability to develop sustainable communities which are inclusive, safe, resilient and sustainable in the short to long term. This situation is unlikely to improve as population growth continues. The speed of delivery is one key issue, with some strategic infrastructure taking multiple decades from initial feasibility to planning. This makes it difficult to see how adequate services would be available to service predicted growth in all three regions in the short to medium term. The negative effects of this would be felt across the environmental receptors - increased homelessness, service outages for critical services, pollution incidents and events arising from malfunctions of services working over capacity, disadvantage and socio-economic effects as well as broader reduced economic resilience. Population increases require planning and provision of education and health services in tandem as these supports are linked to health outcomes. For example, the type of tenure in housing developments can impact on the scale and nature of health care required in an area and this must be planned into population growth models. The national and regional population growth being planned could severely intensify these issues given the variation in available health care and challenging ratios for GP per capita across cities, towns and local communities across Ireland where this growth will occur.

The anticipated growth will require land use change and intensification of land use, especially in the context of compact growth and a focus on infill development over greenfield development. While compact growth may avoid excessive loss of greenfield land, it will add pressure to limited open space / wild areas in urbanised settings, impacting negatively on PHH and BFF. Reduced recreational space has negative health and wellbeing outcomes in the first instance. It may also drive unsustainable numbers to more limited areas e.g. parks, coastal areas, increasing pressure on services and transport e.g. access issues. In addition, these areas may function as refuges for fauna, or as resting places or feeding areas for other wildlife. Recreational pressure has potential to negatively impact on wider BFF as a result. This may act in combination with deterioration in environmental quality in other parameters from the increased intensity of use also and where services such as wastewater treatment are over capacity or not in operation, leading to chemical and or nutrient pollution of soils and water and non-compliance with the requirements of legislation such as the Water Framework Directive and Urban Wastewater Treatment Directive and in turn negatively impacting water dependant habitats and species. Changes to landscape character and loss or interruption of key landscape features that may also support BFF are also an anticipated outcome of the growth projections.

The level of construction required to accommodate the projected growth also has potential for negative effects across all receptors given the scale needed. The recent Housing Commission Report (2024)

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references the Government goal of reaching an average target of 33,000 new dwellings per year until 2030 and an overall ambition by Government to supply 300,000 new homes by 2030. Other sources suggest the targets should be much higher. In any case this will result in considerable land use change and intensification of populations in built up areas not only from housing but also from supporting infrastructure for roads, public transport, active transport, education and health care facilities and services. The provision of homes and supporting infrastructure is obviously positive for PHH and MA however there may be significant negative consequences for these and the other environmental receptors in the short to long term as a result of the level of construction needed. Construction may impact local communities through noise disturbance, emissions of dust to air and deterioration in air quality (AQ), interruption of access and increased construction traffic. Given the focus on existing built up areas this may increase the number of sensitive receptors impacted. BFF may also be impacted by noise disturbance, deterioration in air quality from dust or deposition of NOx from construction related traffic. Water quality (W) may also be impacted from release of suspended solids, overland flows of polluting material and changes to natural drainage patterns. LS may be permanently negatively impacted from sealing of soils, erosion of soil material and generation of excess material requiring re-use to avoid it becoming a waste. Some of this may also be contaminated where brownfield sites are a feature of the compact growth objective. Construction may also impact negatively on CH and LandS by direct impact to known and unknown built heritage features and changes to cultural / heritage landscape character from site preparation, presence of plant and equipment, generation of waste and spoil. A further consideration of the scale of growth and required supports is the embodied carbon in construction. The development of the necessary infrastructure has potential to result in GHG emissions and therefore CF across the life cycle of the infrastructure from materials required to construct, transport of same, site preparation and construction and long term usage. For example it was reported by Department of Enterprise, Trade and Employment¹¹⁶ (DETE) that in 2022, the cement sector accounted for 2.88 Mt CO₂ equivalent, or 4.8% of total national emissions. Decarbonising across all aspects of project development is therefore an essential consideration. A new report and guidance on reducing embodied carbon in cement was recently published by DETE¹¹⁷.

The impact of deleting the previous **NPO 1c** is uncertain. In the 2018 NPF, the intent of this NPO was to reflect likely employment projections in line with anticipated population distribution identified in NPO 3. No updated figures are available and as such the NPO has been deleted. An uncoupling of employment from population growth projections gives potential for growth in employment to occur at a remove from population with unintended consequences for PHH, MA, BFF, W, AQ and CF in particular if people have to commute long distances to achieve quality employment opportunities. Seeking a shift in the pattern of development away from current trends, requires conscious planning for employment and jobs at locations that are integrated with the planned distribution of population. There are also benefits to be achieved by ensuring that employment is linked to population as it can help achieve a more balanced population growth model where people live and work in proximity. Under investment in the infrastructure needed to attract employment opportunities outside the east coast has led to the historic imbalance in development.

NPO 5 includes reference to regional enterprise plans. This Government initiative seeks to collaboratively work with a range of stakeholders to maximise opportunities for enterprise and growth at the regional level. The proposed approach will have direct and indirect positive effects for PHH and MA by harnessing existing infrastructure and funding and providing focus and direction at a regional scale.

NPO 7, 8 and 9 all address the issue of compact growth within the footprint of existing settlements. The impacts of this have been discussed under NPO 3 above.

NPO 10 relates to transport-oriented development (TOD), which emphasises development that is focused around high-capacity transport links, which can enable high density and people-intensive uses to occur. This NPO has potential for positive effects for PHH and MA, AQ and CF in particular where good integration of land use and transport can be integrated allowing people to exit private car use in favour of public transport, reducing transport related emissions. High-quality, high-capacity public transport options are critical to encourage the behavioural shift away from private car usage. Notwithstanding that however, the intensification of people has negative effects especially if services are not delivered in advance or in tandem. As noted in **NPO 3** above this relates to wastewater among other critical services. Insufficient capacities can have indirect negative effects on PHH, W, BFF, MA, AQ (e.g. odour) and LS as a result of uncontrolled or inadequately treated emissions. Increased populations also have potential to put pressure on open space

¹¹⁶ [Government approves public procurement guidance to promote the reduction of embodied carbon in construction \(www.gov.ie\)](https://www.gov.ie/en/publications/2023-06-27-government-approves-public-procurement-guidance-to-promote-the-reduction-of-embodied-carbon-in-construction/)

¹¹⁷ DETE, 2024 [Reducing Embodied Carbon in Cement and Concrete Through Public Procurement \(www.Gov.ie\)](https://www.gov.ie/en/publications/2024-06-27-reducing-embodied-carbon-in-cement-and-concrete-through-public-procurement/)

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and wild areas to facilitate recreation. This can have negative effects on PHH, BFF, W, CH and LandS if visitor numbers lead to disturbance or deterioration in environmental quality as a result of access, littering or overuse. Much of the potential for negative effects can be avoided through phasing of delivery of population in line with capacity and robust route selection to avoid conflicts with sensitive receptors.

NPO 11 is considered to be broadly positive across all environmental factors as it reflects a planning hierarchy wherein increasing levels of detail are achieved through the planning levels which will in turn be used to inform decision making in dynamic circumstances. The reference to development proposals on zoned and serviced development land which are in turn subject of consenting processes will ensure significant negative effects are avoided. The flexibility introduced by opening up the opportunity for suitable sustainable development to be progressed where other parameters are in place is positive for PHH and MA in particular.

Mitigation Proposed:

- **ALL:** While respecting the broad principles of the NPF, population growth will initially be targeted and prioritised to locations which have capacity in key services including but not limited to wastewater treatment in order to avoid negative effects on the receiving environment. This prioritisation will allow time for other target areas to address deficiencies and upgrade as necessary.
- **ALL:** Support the implementation of the guidance and actions contained in the Reducing Embodied Carbon in Cement and Concrete through Public Procurement in Ireland report from DETE as a NPF policy / supporting text.

8.3.3 Chapter 3 – Effective Regional Development

No NPOs are included in Chapter 3 of the NPF, however, the following tables present the changes proposed to the key future planning and development and place-making policy priorities for the three Regions, as well as the key future growth enablers for the five cities as set out in the draft first revision to the NPF. Note: the reference given in the left hand column have been assigned by the SEA Team to enable cross referencing in the assessments that follow. They do not appear in the draft Plan.

8.3.3.1 Key Future Planning and Development and Place-making Policy Priorities for the Eastern and Midland Region

SEA Ref.	2018 Text	2024 Text
EM1	Enabling the complementary development of large and county towns in the wider Greater Dublin Area and Midland areas on the key strategic and public transport routes in a regionally co-ordinated manner, with an enhanced emphasis on measures to promote self-sustaining economic and employment based development opportunities to match and catch-up on rapid phases of housing delivery in recent years.	No change
EM2	More effective strategic planning and co-ordination of the future development of nationally and regionally strategic locations at points that straddle boundaries between this and neighbouring regions as in the example of Athlone, which is a focal point for an area reaching into much of this and neighbouring regions in economic and employment, transport, education and public service delivery and retailing terms.	No change
EM3	A focused approach to compact, sequential and sustainable development of the larger urban areas along the Dublin – Belfast economic and transport corridor, along which there are settlements with significant populations such as Dundalk and Drogheda.	No change

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SEA Ref.	2018 Text	2024 Text
EM4	More emphasis on consolidating the development of places that grew rapidly in the past decade or so with large scale commuter driven housing development with a particular focus on addressing local community and amenity facility provision in many of the larger commuter towns through targeted investment under relevant NPF National Strategic Outcomes.	More emphasis on consolidating the development of places that grew rapidly in the past decade or so with large scale commuter driven housing development with a particular focus on addressing identifying and prioritising infrastructure and local community and amenity facility provision in many of the larger commuter towns through targeted investment under relevant NPF National Strategic Outcomes
EM5	Preparing and implementing a regional priorities programme, to shape and inform delivery of the Regeneration and Development Initiative. Part of this programme should identify significant ready to go city, rural town and village and rural rejuvenation priorities which could harness publicly owned land and other assets that are not being used actively at present such as former healthcare, military, transport and other complexes and combining the potential of such assets with community and wider private and public sector support and investment to bring about the transformation of both urban and rural areas and places in an integrated manner.	Deleted
EM6	Tourism development and promotional branding to ensure that areas like the Midlands and Lakelands areas are developed and promoted in such a way as to play their full part in tapping the economic potential of regional and rural areas in the region.	Tourism development and promotional branding to ensure that areas like the Midlands and Lakelands areas such as 'Ireland's Ancient East' and 'Ireland's Hidden Heartlands' are developed and promoted in such a way as to play their full part in tapping the economic potential of regional and rural areas in the region
EM7	Harnessing the potential of the region in renewable energy terms across the technological spectrum from wind and solar to biomass and, where applicable, wave energy, focusing in particular on the extensive tracts of publicly owned peat extraction areas in order to enable a managed transition of the local economies of such areas in gaining the economic benefits of greener energy.	Developing harnessing the potential of the region in renewable energy terms, in accordance with the capacity allocation targets set out in Chapter 9: Realising Our Sustainable Future , across the technological spectrum from wind and solar to biomass and, where applicable, wave energy, focusing in particular on the extensive tracts of publicly owned peat extraction areas in order to enable support a managed transition of local economies of such areas in gaining the economic benefits of to greener energy
EM8	Building on the progress made in developing an integrated network of greenways, blueways and peatways, that will support the diversification of rural and regional economies and promote more sustainable forms of travel and activity based recreation utilising canal and former rail and other routes	No change

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
EM 4	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
EM 5 Deleted	-	0/+	0	0	0	0	-	-	-
EM 6	0	0	0	0	0	0	0	0	0
EM 7	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

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EM4 proposes to include a significant amendment to specifically clarify the need to focus on identifying and delivering infrastructure in settlements that grew rapidly as a result of historic land use planning practices. The changes that relate to infrastructural development for provision of amenities will have direct positive effects for PHH and MA by ensuring communities have access to quality infrastructure and local community and amenity facility provision to support long term sustainability of these communities. The reference to the larger commuter towns is noted. A strategy to link smaller areas which may also have developed along the commuter belts would benefit a wider cross section and ensure smaller areas are not left behind. It will be essential to ensure that all life stages are considered in the amenities provision including teens / young adults and older people, groups which can be overlooked in amenity provision. As with any infrastructural development, there is a potential for indirect positive and negative impacts on PHH, BFF, LS, W, AQ, CH, MA and LandS during construction phase related to increased dust, noise, travel disruptions; disturbance, loss or fragmentation of habitats; loss of soil resource/soil sealing or hydrogeological effects; pollutant or construction debris run-off; alterations to heritage features/setting or landscape and views from new infrastructural elements. Robust siting and environmental studies are required to inform and support the strategic planning of such facilities.

EM5 has been deleted. The priority relates to Regeneration and Development Funds, harnessing publicly owned land and other assets to bring about the transformation of both urban and rural areas in an integrated manner. The removal of this as a priority will have negative effects for PHH, MA in particular and also indirect negative effects for CH and LandS where these assets are allowed to fall into a derelict state. The inclusion of the priority signals an intent to support communities in this regeneration with long term positive impacts for the receptors noted. Furthermore, it is noted that a similar policy is retained for North Western Region (See NW 7).

EM6 has been amended to remove reference to the Midlands and Lakelands and replace with reference to Ireland's Ancient East and Ireland's Hidden Heartlands, which is a better reflection of the tourism branding that has been generated in recent years; as such the amendments are therefore considered not significant.

EM7 has been amended to reflect the inclusion in Chapter 9 of the draft Plan, of a new NPO75 setting out new regional targets for renewable energy generation. Such strategic support is broadly positive for CF in the short to long term, providing greater policy support for the delivery of national targets through the planning hierarchy. This is considered necessary if the national climate objective is to be achieved. This would also have direct positive effects for PHH and MA through increased security of supply of indigenous generating capacity and greater resilience in the economy. Deployment of renewable energies will have positive indirect effects on AQ and PHH through reduced air pollution from a transition from fossil fuel based transport and heat generation in particular. There are also indirect positive effects for PHH, BFF, W and LS in particular where climate risk can be reduced by moving toward Ireland's climate neutral objectives. Co-locating onshore wind, solar or other emerging technologies offers a number of benefits both in terms of maximising the renewable generating capacity of the land bank and concentrating the grid connection requirements.

Deployment of renewable energies will however have significant potential for negative effects on all environmental receptors particularly BFF, LS, W, LandS and CH from construction activity and permanent impacts on LandS, BFF, LS and CH during operation resulting from disturbance and fragmentation of habitats and species, changes to heritage/landscape character, visual intrusion and land use change. There will also be potential for temporary negative impacts from construction activities for AQ due to generation of dust and particulate matter. These impacts can be mitigated to an extent through robust site and route selection, thoughtful design, and project-level mitigation. See also **Section 8.3.9** for further consideration of regional targets.

Mitigation Proposed:

- **EM4:** A strategy to link larger commuter towns with smaller areas would benefit a wider cross section and ensure smaller areas are not left behind as a result of lack of investment.
- **EM5:** This priority should be reinstated.
- **EM7:** As per mitigation for NPOs 75 and 76.

8.3.3.2 Key Future Growth Enablers for Dublin

SEA Ref.	2018 Text	2024 Text
D1	Identifying a number of ambitious large- scale regeneration areas for the provision of new housing and employment throughout the city and metropolitan area and the measures required to facilitate them as integrated, sustainable development projects;	No change.

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SEA Ref.	2018 Text	2024 Text
D2	Progressing the sustainable development of new greenfield areas for housing, especially those on public transport corridors, such as Adamstown, Cherrywood, Clonburris and Clongriffin;	Progressing the sustainable development of new brownfield and greenfield areas for housing especially those on along existing and planned high capacity public transport corridors such as Adamstown, Cherrywood, Clonburris and Clongriffin focusing on large-scale Transport Orientated Development (TOD) opportunities within the metropolitan area
D3	Determining a limited number of accessible locations for significant people-intensive employment to complement the city-centre and docklands areas;	No change
D4	Enabling enhanced opportunities for existing communities as development and diversification occurs, particularly through employment, learning and education support;	No change
D5	Relocating less intensive uses outside the M50 ring in particular and from the existing built-up area generally;	No change
D6	Delivering the key rail projects set out in the Transport Strategy for the Greater Dublin Area including Metro Link, DART expansion and the Luas green line link to Metro Link;	Delivering the key transport rail projects set out in the Transport Strategy for the Greater Dublin Area including DART+, MetroLink, DART expansion and the Luas green line link to Metro Link-Luas Expansion, BusConnects and key elements of the metropolitan area cycle network, inclusive of commuter routes and urban greenways
D7	The development of an improved bus-based system, with better orbital connectivity and integration with other transport networks	Deleted
D8	Ensuring that water supply and waste-water needs are met by new national projects to enhance the city's and the wider Greater Dublin Area's water supply and increase waste water treatment capacity;	Ensuring that key water supply and waste-water projects needed are met by new national projects to enhance the city's and the wider to support long term growth within the metropolitan area are delivered, including the Greater Dublin Drainage Project and Dublin Water Supply Project
D9	Improving sustainability in terms of energy, waste and water, to include district heating and water conservation	No change
D10	Public realm and urban amenity projects, focused on streets and public spaces, especially in the area between the canals and where linked to social regeneration projects;	No change
D11	Measures to enhance and better link the existing network of green spaces, including the Phoenix Park and other parks, Dublin Bay and the canals, subject to carrying out a routing study and any necessary environmental assessments;	Measures to enhance and better link the existing network of green and blue spaces, including the Phoenix Park and other parks, Dublin Bay and the canals, in line with the County and City Biodiversity Action Plans , subject to carrying out a routing study and any necessary environmental assessments
D12	Delivery of the metropolitan cycle network set out in the Greater Dublin Area Cycle Network Plan inclusive of key commuter routes and urban greenways on the canal, river and coastal corridors;	Deleted
D13	Improving access to Dublin Airport, to include improved public transport access, connections from the road network from the west and north and in the longer term, consideration of heavy rail access to facilitate direct services from the national rail D13 network in the context of potential future electrification	No change
D14	Facilitating the growth of Dublin Port through greater efficiency, limited expansion into Dublin	No change

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SEA Ref.	2018 Text	2024 Text
	Harbour and improved road access, particularly to/from the southern port area	
D15	Improving sustainability in terms of energy, waste management and resource efficiency and water, to include district heating and water conservation	No change

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
D 2	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
D 6	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
D 7 (Deleted)	0	0	0	0	0	0	0	0	0
D 8	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
D 11	0	0	0	0	0	0	0	0	0
D 12 (Deleted)	0	0	0	0	0	0	0	0	0

Key: *PHH: Population & Human Health; BFF: Biodiversity, Flora & Fauna; LS: Land & Soils/Sediments; W: Water; AQ: Air Quality; CF: Climatic Factors; MA: Material Assets; CH: Cultural Heritage; LandS: Landscape.*

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Revisions to the Key Growth enablers for the Dublin Region in the main focus on development along key high capacity transport links and the provision of critical water and wastewater services needed to support growth in Dublin. **D2** and **D6** in particular reference Transport Orientated Development and update the list of key transport projects which will underpin large-scale Transport Orientated Development opportunities within the metropolitan area. Many of the projects listed in D6, e.g., DART+, Metrolink and Bus Connects are already engaged in project planning and the statutory planning process and are subject to project level EIA and AA and the outcomes of the planning process. A focus on Transport Orientated Development that promotes the provision of homes, jobs, services and amenities along high capacity public transport will have positive direct effects for PHH, AQ, CF and MA by supporting sustainable mobility in cities and surrounding metropolitan areas which is not focussed on car ownership. The critical mass of population with access to public transport supports the behavioural shifts needed to achieve the modal shift needed. This integrated land use and transport approach will also have positive effects for PHH and MA where new developments can be integrated into the existing built-up area of the city which is already serviced by existing or planned high capacity public transport. Many of the areas adjoining these proposed transport links are already designated as Strategic Development Zones (SDZs) or are identified in the Regional Spatial and Economic Strategy and city and county development plans and have been subject to SEA and AA. This tiering of assessment is considered a positive approach to ensure avoidance of significant effects with several opportunities to avoid or remedy impacts along the planning system. It should be noted that some projects may stay within the planning system for long periods due to financing, changes to political priorities and legal challenges. There can be long lead-in times from granting of consent to construction/rollout and eventual operation of large-scale transport options. If there is a misalignment of provision of homes, jobs, services and amenities and the necessary transport links this would be negative for PHH, BFF, AQ, CF, LS and MA if people have to rely on private cars in the interim. Cumulatively the promotion of TOD has potential to impact negatively on all receptors from land use change from both the linear corridors for transport and the adjacent large scale developments proposed. There is potential for direct and indirect negative effects for all environmental receptors during the construction of any infrastructure e.g., disturbance, loss or fragmentation of habitats including those in European Sites, loss of soil resource/soil sealing or hydrogeological effects, pollutant or construction debris run-off, increased dust, noise, travel disruptions, alterations to heritage features/setting or landscape and views from new infrastructural elements. Robust site and route selection and tiering of impact assessment throughout the planning hierarchy can avoid / remedy this to an extent. Project level mitigations will also be required.

The express reference to use of brownfield sites as well as greenfield sites in **D2** is also positive for PHH, MA and LS as reuse of these sites offers the greatest opportunity for remediation with further indirect positive effects for W where contamination may be impacting negatively on water quality. Some negative effects are likely in the short to medium term for PHH, BFF, LS, W, BFF and MA where contamination has to be treated in situ or removed offsite giving rise to mobilisation of dust and particulate matter from extraction and potential remobilisation of contamination in soil or water impacting on PHH and BFF. Longer term negative effects are also possible for BFF where low management areas are lost to intensive development leading to fragmentation and disturbance of habitats and species.

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Enablers **D7** and **D12** have been deleted, however, it is acknowledged that D6 has been revised to include reference to the BusConnects programme and metropolitan cycle networks. As such these deletions are considered not significant.

D8 has been amended to include the specific reference to Greater Dublin Drainage Project and Dublin Water Supply Project. The revised policy emphasises on the importance of delivering these projects in order to support the long-term population growth within Dublin. This will have positive effects for PHH, W and MA as these project is considered key enablers at a national scale to unlock potential for the growth needed in the E&M Region and within Dublin to ensure long term economic wellbeing. The policy support will also have indirect positive effects for all environmental receptors as they will address negative effects associated with current infrastructure failings in terms of water pollution, odour, and interruptions in access to water supplies, deterioration of habitats and disruption of species among others. As with any infrastructural development, these projects there is potential for direct and indirect negative effects for all environmental receptors during the construction phase related increased dust, noise, travel disruptions, disturbance, loss or fragmentation of habitats, loss of soil resource/soil sealing or hydrogeological effects, along with potential for pollution or construction debris run-off and impacts to on heritage features/setting and landscape/amenity. Robust site and route selection and tiering of impact assessment throughout the planning hierarchy can avoid / remedy this to an extent. Project level mitigations will also be required. There are also operational effects e.g., expanded services and the increased frequency of public services generating increased levels of operational noise for adjacent communities which has long-term permanent negative implications for PHH and AQ (i.e., noise). These key projects will be subject to the planning process prior to delivery and mitigation will be implemented to address negative effects.

D11 have been amended to include references to blue spaces and recognises the role for County and City Biodiversity Action Plans to provide further clarity in relation to the measures that focus on improving the existing network of blue and green spaces. As such the amendments are therefore considered not significant.

Mitigation Proposed:

- **ALL:** The supporting text should state that infrastructure and project proposals are subject to the outcomes of the applicable environmental, planning and consenting processes.
- **ALL:** The enablers should include the need to incorporate carbon sinks and nature restoration proposals into key development areas. Adaptations that build resilience for sea level rise due to climate change risks should also be referenced when targeting development in coastal locations.

8.3.3.3 Key Future Planning and Development and Place-making Policy Priorities for the Northern and Western Region

SEA Ref.	2018 Text	2024 Text
NW1	Developing and implementing a comprehensive and strategic metropolitan area spatial plan for Galway city, to enable its continued strategic development in a transformational and urban rejuvenation focused manner, with a special focus on capitalising on the potential of underutilised and publicly owned and centrally located sites and activating their potential to boost the population and economic output levels of central areas.	Developing and implementing a comprehensive and strategic the metropolitan area spatial strategic plan for Galway city, to enable its continued strategic development in a transformational and urban rejuvenation focused manner, with a special focus on capitalising on the potential of underutilised and publicly owned and centrally located sites and activating their potential to boost the population and economic output levels of central areas.
NW2	Enhancing the city-region like functions performed by Sligo in line with its statutory development plan, activating the potential for further rejuvenation and renewal of its core and further enhancing its connectivity in a national and regional context to ensure wider accessibility of relevant services and amenities	No change
NW3	Further implementation of the strategic partnership between the Donegal and Derry local authorities in the context of the further enhancement of the North West Gateway Initiative area, delivering a wide range of economic, infrastructural, community and public service functions in the wider north-west.	Further implementation of the strategic partnership between the Donegal and Derry local authorities in the context of the further enhancement of the North West Gateway Initiative City Region area, delivering a wide range of economic, infrastructural, community and public service functions in the wider north- west

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SEA Ref.	2018 Text	2024 Text
NW4	More effective strategic planning and co-ordination of the future development of nationally and regionally strategic places, including points straddling boundaries with neighbouring regions, like Athlone and Letterkenny which are focal points for large geographical areas reaching into much of this and neighbouring regions in economic and employment, transport, education and public service delivery and retailing terms.	No change
NW5	Supporting the emerging and ongoing development, at both local and community levels, of the network of both urban and rural places working together for regional benefit under the Atlantic Economic Corridor initiative, including university and higher education and research alliances, and improved connectivity.	No change
NW6	Integrated planning, management and development of the areas traversed by the Wild Atlantic Way to maximise both the quality and integrity of the visitor experience and the added benefit in economic terms, especially for rural and local communities.	No change
NW7	Supported by the Rural and Urban Regeneration and Development Funds, shaping and informing delivery of city, rural town and village rural rejuvenation priorities, harnessing publicly owned land and other assets that are not being used actively at present, such as former healthcare, military, transport and other complexes and combining the potential of such assets with community and wider private and public sector support and investment, to bring about the transformation of both urban and rural areas in an integrated manner.	No change
NW8	Harnessing the potential of the region in renewable energy terms across the technological spectrum from wind and solar to biomass and wave energy	Harnessing the potential of the region in renewable energy terms in accordance with the capacity allocation targets set out in Chapter 9: Realising Our Sustainable Future across the technological spectrum from wind and solar, in addition to biomass and wave energy
NW9	Building on the progress made in developing an integrated network of greenways, blueways and peatways that will support the diversification of rural and regional economies and promote more sustainable forms of travel and activity based recreation utilising canal and other routes.	No change

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NW 1	0	0	0	0	0	0	0	0	0
NW 3	0	0	0	0	0	0	0	0	0
NW 8	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

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NW1 has been updated to recognise that implementation is the focus for the Galway MASP during this cycle of the NPF. A minor correction in terminology is also made. No significant effects predicted.

NW3 has been amended to update the reference 'Gateway Initiative area' to 'City Region area'. No significant effects predicted.

NW 8 amended to reflect the inclusion in Chapter 9 of the draft Plan, of a new NPO75 setting out new regional targets for renewable energy generation. Such strategic support is broadly positive for CF in the short to long term, providing greater policy support for the delivery of national targets through the planning hierarchy. This is considered necessary if the national climate objective is to be achieved. This would also have direct positive effects for PHH and MA through increased security of supply of indigenous generating capacity and greater resilience in the economy. Deployment of renewable energies will have positive indirect effects on AQ and PHH through reduced air pollution from a transition from fossil fuel based transport and heat generation in particular. There are also indirect positive effects for PHH, BFF, W and LS in particular where climate risk can be reduced by moving toward Ireland's climate neutral objectives. Co-locating onshore wind, solar or other emerging technologies offers a number of benefits both in terms of maximising the renewable generating capacity of the land bank and concentrating the grid connection requirements.

Deployment of renewable energies will however have significant potential for negative effects on all environmental receptors particularly BFF, LS, W, LandS and CH from construction activity and permanent impacts on LandS, BFF, LS and CH during operation resulting from disturbance and fragmentation of habitats and species, changes to heritage/landscape character, visual intrusion and land use change. There will also be potential for temporary negative impacts from construction activities for AQ due to generation of dust and particulate matter. These impacts can be mitigated to an extent through robust site and route selection, thoughtful design, and project-level mitigation. See also **Section 8.3.9** for further consideration of regional targets.

Mitigation Proposed:

- NW 8- As per mitigation for NPOs 75 and 76.

8.3.3.4 Key Future Growth Enablers for Galway

SEA Ref.	2018 Text	2024 Text
G1	Delivering a number of regeneration projects to extend and intensify the City Centre, including the Station, Docks and Headford Road areas	Delivering a number of regeneration projects to extend and intensify the City Centre, including the Station, Docks, Headford Road and Sandy Road areas
G2	Identifying infill and regeneration opportunities to intensify housing and employment development throughout inner suburban areas	No change
G3	Progressing the sustainable development of new greenfield areas for housing and the development of supporting public transport and infrastructure, such as at Ardaun	No change
G4	Improving access and sustainable transport links to, and integration with, the existing employment areas to the east of the City at Parkmore, Ballybrit and Mervue	No change
G5	The continued expansion of the city's third level institutions and integration with the city and region	No change
G6	Determining the sustainable future development of the Galway Airport site for employment and/or residential use together with supporting facilities and infrastructure	Deleted
G7	N/A	NEW: Development of strategic regeneration and development projects and proposals for the City including: -'Galway Public Spaces and Streets Project'

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SEA Ref.	2018 Text	2024 Text
		-Galway Innovation and Creativity District -Galway Airport Site
G8	Provision of a Citywide public transport network, with enhanced accessibility between existing and proposed residential areas and the City Centre, third level institutions and the employment areas to the east of the city	Provision of a Citywide public transport network, informed by the development of a Galway Metropolitan Area Transport Strategy (GMATS) with enhanced accessibility between existing and proposed residential areas and the City Centre, third level institutions and the employment areas to the east of the city
G9	Public realm and urban amenity projects, focused on streets and public spaces, particularly in support of an extended city centre area and where residential and employment areas can be linked to pedestrian routes	No change
G10	Development of a strategic cycleway network with a number of high capacity flagship routes	No change
G11	Delivery of the Galway City Ring Road	No change
G12	Delivery of the Galway East Main Drainage Waste Water Treatment Plant	Delivery of the Galway East Main Drainage Waste Water Treatment Plant Scheme as part of the wider Greater Galway Area Drainage Study
G13	Ensuring that water supply and wastewater needs are met by new national projects to enhance Galway's water supply and increase waste water treatment capacity	No change
G14	Improving sustainability in terms of energy, waste management and resource efficiency and water, to include district heating and water conservation	No change

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
G 1	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
G 6 Deleted	0	0	0	0	0	0	0	0	0
G 7	+/-	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-
G 8	+	0	0	0	+	+	+	0	0
G 12	0	0	0	0	0	0	0	0	0

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

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Assessment and Discussion:

G1 has been amended to incorporate reference to the Sandy Road area. Regeneration plans are underway as part of a partnership between the Land Development Agency and Galway City Council. The future development of Sandy Road area will focus on optimising brownfield and underutilised areas with direct and indirect positive effects for PHH, MA, LS, W and LandS from regeneration and optimising of brownfield sites. Environmental sensitivities in the area include the Terryland River which is listed as At Risk of not achieving its WFD objectives. This river enters an inland marsh before out falling into Lough Corrib SAC, a European designated site and also a designated drinking water source. Any development of the Sandy Road area would have to address these water related issues as a priority to avoid cumulative negative effects on W and BFF, PHH and MA. There are also a number of built heritage features which would require sensitive design. The Masterplan for the area should include consideration of environmental sensitivities to avoid unnecessary negative effects.

G6 has been deleted. However, it is acknowledged that the new enabler G7 has been added to also include reference to Galway Airport Site as one of the strategic regeneration and development projects (See assessment for G7 below). As such this deletion is considered not significant.

G7 is a new enabler related to strategic regeneration and development projects and proposals. This new enabler (which includes reference to the Airport Site from the now deleted G6) has potential for a number of positive impacts as urban regeneration focusing on brownfield sites (which can include intensification of housing and employment) will bring positive impacts for PHH, MA, LandS and BFF. Through regeneration, uncontrolled run-off or contamination issues are generally improved upon resulting in positive impacts to LS and W. There is also potential for negative impacts for BFF, LS and W over short to medium term however, where regeneration results in emissions to water or the generation of contaminated material from infill/brownfield sites, disturbance to bat species and birds which may be roosting / nesting in vacant and derelict buildings. Development, once sustainable, should result in positive impacts to AQ and CF in the short to medium term as compact settlement will target development in areas that are served by public transport which will subsequently help reduce car dependency. From a landscape and visual perspective, regeneration generally results in improved visual impacts and restoration of cultural heritage where present and therefore positive impacts for LandS and CH. However, rapid changes due to regeneration may alter the character and identity of a place, sometimes erasing historical or cultural significance thereby negatively impacting CH and LandS. It is important that the heritage features are restored in a sustainable manner. There are also operational effects e.g., expanded services and the increased frequency of public services generating increased levels of operational noise for adjacent communities which has long-term permanent negative implications for PHH.

G8 has been amended to include reference to the Galway Metropolitan Area Transport Strategy (GMATS). It is noted that the NTA and Galway City Council refers to the strategy as the 'Galway Transport Strategy (GTS)', and that this strategy was subject to SEA. It should be clarified in the NPF and the enabler if the GTS is the same strategy as the MATS.

G12 has been amended to reference the wider strategy under which the Galway East Main Drainage Scheme sits. As such the amendment is considered not significant. It is to be noted that the Greater Galway Area Drainage Study is currently underway.

Mitigation Proposed:

- **ALL:** The supporting text should state that infrastructure and project proposals are subject to the outcomes of the applicable environmental, planning and consenting processes.
- **ALL:** The enablers should include the need to incorporate carbon sinks and nature restoration proposals into key development areas. Adaptations that build resilience for sea level rise due to climate change risks should also be referenced when targeting development in coastal locations.
- **G3:** Although this enabler is unchanged, it is noted that similar enablers such as D2 for Dublin and C2 for Cork related to sustainable development in greenfield areas have been revised to include 'brownfield areas'. It is recommended that G3 is revised to include this reference as prioritising infill development into brownfield sites over greenfield sites can offer positive implications for BFF, LS and W.
- **G8:** It should be clarified if the GMATS is the same strategy as the Galway Transport Strategy (GTS).

8.3.3.5 Key Future Planning and Development and Place-making Policy Priorities for the Southern Region

SEA Ref.	2018 Text	2024 Text
SR1	Developing and implementing comprehensive and strategic metropolitan area spatial plans for Cork, Limerick and Waterford cities that secure long-term transformational and rejuvenation-focused city development, with a special emphasis on capitalising on the potential of underutilised and publicly owned and centrally located sites and activating their potential to boost the population and economic output levels of city centre areas as drivers for wider regions.	Developing and implementing comprehensive and strategic the Metropolitan Area strategic spatial plans for Cork, Limerick and Waterford cities that secure long-term transformational and rejuvenation-focused city development, with a special emphasis on capitalising on the potential of underutilised and publicly owned and centrally located sites and activating their potential to boost the population and economic output levels of city centre areas as drivers for wider regions.
SR2	Allied to strategies to deliver more compact urban development in the main cities, to enhance the efficiency and effectiveness of transport links between the cities to enable them to function in concert with each other and harness their complementary strengths in an increasingly networked manner.	No change
SR3	Measures to support the integrated development of remoter parts of this region, particularly rural peninsular areas and towns on its western seaboard, including the ongoing investment in the transport and communications area, particularly in the roll-out of the national broadband scheme and further promotion and development of attractions to capitalise on underutilised potential in the tourism and local enterprise areas.	No change
SR4	Integrated planning, management and development of the areas traversed by the Wild Atlantic Way to maximise both the quality and integrity of the visitor experience and the added benefit in economic terms, especially for rural and local communities.	No change
SR5	Harnessing the potential of the region in renewable energy terms across the technological spectrum from wind and solar to biomass and wave energy, focusing in particular on the extensive tracts of publicly owned peat extraction areas in order to enable a managed transition of the local economies of such areas in gaining the economic benefits of greener energy.	Harnessing the potential of the region in renewable energy terms in accordance with the capacity allocation targets set out in Chapter 9: Realising Our Sustainable Future , across the technological spectrum from wind and solar, in addition to biomass and wave energy.
SR6	More emphasis on consolidating the development of places that grew rapidly in the past decade or so with large scale commuter driven housing development with a particular focus on addressing local community and amenity facility provision in many of the larger commuter towns through targeted investment under relevant NPF National Strategic Outcomes.	No change
SR7	Developing a more integrated network of greenways, blueways and peatways to support the diversification of rural and regional economies and promote more sustainable forms of travel and activity based recreation.	No change
SR8	Preparing and implementing a regional rejuvenation priorities programme, to shape and inform delivery of the Regeneration and Development Fund and identifying significant	Deleted

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SEA 2018 Text Ref.	2024 Text
	ready-to-go city, rural town and village and rural rejuvenation priorities harnessing publicly owned land and other assets that are not being used actively at present, such as former healthcare, military, transport and other complexes and combining the potential of such assets with community and wider private and public sector support and investment to bring about the transformation of both urban and rural areas and places in an integrated manner.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
SR 1	0	0	0	0	0	0	0	0	0
SR 5	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
SR 8 Deleted	-	0/+	0	0	0	0	-	-	-

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

Assessment and Discussion:

SR1 has been updated to recognise that implementation is the focus for the Cork, Waterford and Limerick MASPs during this cycle of the NPF. A minor correction in terminology is also made. No significant effects predicted.

SR5 amended to reflect the inclusion in Chapter 9 of the draft Plan, of a new NPO75 setting out new regional targets for renewable energy generation. Such strategic support is broadly positive for CF in the short to long term, providing greater policy support for the delivery of national targets through the planning hierarchy. This is considered necessary if the national climate objective is to be achieved. This would also have direct positive effects for PHH and MA through increased security of supply of indigenous generating capacity and greater resilience in the economy. Deployment of renewable energies will have positive indirect effects on AQ and PHH through reduced air pollution from a transition from fossil fuel based transport and heat generation in particular. There is also indirect positive effects for PHH, BFF, W and LS in particular where climate risk can be reduced by moving toward Ireland's climate neutral objectives. Co-locating onshore wind, solar or other emerging technologies offers a number of benefits both in terms of maximising the renewable generating capacity of the land bank and concentrating the grid connection requirements. Deployment of renewable energies will however have significant potential for negative effects on all environmental receptors particularly BFF, LS, W, LandS and CH from construction activity and permanent impacts on LandS, BFF, LS and CH during operation resulting from disturbance and fragmentation of habitats and species, changes to heritage/landscape character, visual intrusion and land use change. There will also be potential for temporary negative impacts from construction activities for AQ due to generation of dust and particulate matter. These impacts can be mitigated to an extent through robust site and route selection, thoughtful design, and project-level mitigation. See also **Section 8.3.9** for further consideration of regional targets.

SR 8 has been deleted. The enabler relates to Regeneration and Development Funds, harnessing publicly owned land and other assets to bring about the transformation of both urban and rural areas in an integrated manner. The removal of this as a priority will have negative effects for PHH, MA in particular and also indirect negative effects for CH and LandS where these assets are allowed to fall into a derelict state. The inclusion of the priority signals an intent to support communities in this regeneration with long term positive impacts for the receptors noted. Furthermore, it is noted that a similar policy is retained for North Western Region (See NW 7).

Mitigation Proposed:

- **SR 5:** As per mitigation for NPOs 75 and 76.
- **SR8:** This enabler should be reinstated.

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8.3.3.6 Key Future Growth Enablers for Cork

SEA Ref.	2018 Text	2024 Text
C1	Delivering ambitious large-scale regeneration projects for the provision of new employment, housing and supporting infrastructure in Cork Docklands (City Docks and Tivoli) as integrated, sustainable developments, including relocation of two 'Seveso' sites from the City Docks	No change
C2	The development of a much enhanced Citywide public transport system to incorporate subject to further analysis, proposals for an east-west corridor from Mahon, through the City Centre to Ballincollig and a north-south corridor with a link to the Airport;	The development of a much enhanced Citywide public transport system based on the Cork Metropolitan Area Transport Strategy , to incorporate subject to further analysis, proposals for an east-west corridor from Mahon, through the City Centre to Ballincollig and a north-south corridor with a link to the Airport
C3	Progressing the sustainable development of new greenfield areas for housing, especially those on public transport corridors, such as Monard.	Implementation of BusConnects Cork, the new Cork Metropolitan Bus Network progressing the sustainable development of new brownfield and greenfield areas for housing, especially those on public transport corridors, such as Monard along existing and planned high capacity public transport corridors with a particular focus on large-scale Transport Orientated Development (TOD) opportunities within the metropolitan area
C4	Identifying infill and regeneration opportunities to intensify housing development in inner city and inner suburban areas, supported by public realm and urban amenity projects	No change
C5	Enabling enhanced opportunities for existing communities as development and diversification occurs, particularly through employment, learning and education support	No change
C6	Development of a new science and innovation park to the west of the City, accessible by public transport	No change
C7	The continued expansion of and integration with the City's third level institutions	The continued expansion of and integration with the City's third level institutions including University College Cork and the Munster Technological University, of which, three of six campuses are located in Cork City
C8	M8/N25/N40 Dunkettle Junction upgrade (approved) and improved Ringaskiddy Port access	M8/N25/N40 Dunkettle Junction upgrade (approved) and Improved Ringaskiddy Port access
C9	Enhanced regional connectivity through improved average journey times by road	No change
C10	Improved traffic flow around the City, which subject to assessment could include upgrade of the N40, and/or alternatives which may include enhanced public transport	Deleted
C11		NEW: Key enabling projects required to facilitate the regeneration of Cork City Docklands, including completion of the M28 Cork to Ringaskiddy project and the R624 Cobh Road improvement project, including the replacement of Belvelly Bridge.
C12	Improved rail journey times to Dublin and consideration of improved onward direct network connections	No change
C13	Ensuring that water supply and waste- water needs are met by new national projects to enhance Corks water supply and increase waste water treatment capacity	No change

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SEA Ref.	2018 Text	2024 Text
C14	Improving sustainability in terms of energy, waste management and resource efficiency and water, to include district heating and water conservation	No change

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
C 2	0	0	0	0	0	0	0	0	0
C 3	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
C 7	0	0	0	0	0	0	0	0	0
C 8	0	0	0	0	0	0	0	0	0
C 10 Deleted	0	0	0	0	0	0	0	0	0
C 11	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-

Key: *PHH:* Population & Human Health; *BFF:* Biodiversity, Flora & Fauna; *LS:* Land & Soils/Sediments; *W:* Water; *AQ:* Air Quality; *CF:* Climatic Factors; *MA:* Material Assets; *CH:* Cultural Heritage; *LandS:* Landscape.

Assessment and Discussion:

C2 has been updated to include reference to the Cork Metropolitan Area Transport Strategy (CMATS) that would influence the development of the city's public transport system. The wording has also been updated to indicate that the finalised proposals for the east-west and north south corridors will be incorporated into this strategy. The Cork Metropolitan Area Transport Strategy has already been subjected to an SEA and AA. No significant effects anticipated from this update.

C3 has been updated to refer to the provision of public transport in accordance with the CMATS, which was subject to an SEA and AA. It is an objective of that strategy to roll out of the BusConnects programme in Cork. The BusConnects programme across the five cities are at various stages of development, and the process includes route optioneering, followed by identification of Preferred Route Options and statutory consent applications to ABP, which includes transport and environmental impact assessments. Therefore, no significant effects anticipated from this update.

Revised wording for C3 also acknowledges Transport Orientated Development. As noted under D2 enabler for Dublin, focus on Transport Orientated Development that promotes the provision of homes, jobs, services and amenities along high capacity public transport will have positive direct effects for PHH, AQ, CF and MA by supporting sustainable mobility in cities and surrounding metropolitan areas which is not focussed on car ownership. The critical mass of population with access to public transport supports the behavioural shifts needed to achieve the modal shift needed. This integrated land use and transport approach will also have positive effects for PHH and MA where new developments can be integrated into the existing built-up area of the city which is already serviced by existing or planned high capacity public transport. There can be long lead-in times from granting of consent to construction/rollout and eventual operation of large-scale transport options. If there is a mis-alignment of provision of homes, jobs, services and amenities and the necessary transport links this would be negative for PHH, BFF, AQ, CF, LS and MA if people have to rely on private cars in the interim. Cumulatively the promotion of TOD has potential to impact negatively on all receptors from land use change from both the linear corridors for transport and the adjacent large scale developments proposed. There is potential for direct and indirect negative effects for all environmental receptors during the construction of any infrastructure e.g., disturbance, loss or fragmentation of habitats including those in European Sites, loss of soil resource/soil sealing or hydrogeological effects, pollutant or construction debris run-off, increased dust, noise, travel disruptions, alterations to heritage features/setting or landscape and views from new infrastructural elements. Robust site and route selection and tiering of impact assessment throughout the planning hierarchy can avoid / remedy this to an extent. Project level mitigations will also be required.

The express reference to use of brownfield sites as well as greenfield sites is also positive for PHH, MA and LS as reuse of these sites offers the greatest opportunity for remediation with further indirect positive effects for W where contamination may be impacting negatively on water quality. Some negative effects are likely in the short to medium term for PHH, BFF, LS, W, BFF and MA where contamination has to be treated in situ or removed offsite giving rise to mobilisation of dust and particulate matter from extraction and potential remobilisation of contamination in soil or water impacting on PHH and BFF. Longer term negative effects are also possible for BFF where low management areas are lost to intensive development leading to fragmentation and disturbance of habitats and species.

C7 has minor amendments to name third level institutions within the city. As such the amendment is therefore considered not significant. No significant effects anticipated from this update.

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Assessment and Discussion:

C8 has been revised to remove the reference to the M8/N25/N40 Dunkettle Junction upgrade as this scheme was officially opened in February 2024. No significant effects anticipated from this update.

C10 has been deleted as the N40 Dunkettle Junction upgrade scheme was officially opened in February 2024. Specific references to road improvement projects are now included in the new enabler C3 and C11. No significant effects anticipated from this deletion.

C11 is a new enabler that emphasises the need for key enabling projects to facilitate the regeneration of Cork City Docklands, including completion of the M28 Cork to Ringaskiddy project, the R624 Cobh Road improvement project and the replacement of Belvelly Bridge. The projects of this scale will have positive impacts for PHH due to improved access and connectivity and opportunities for housing and other uses on lands opened up for regeneration. This will also have indirect positive effects for LS, LandS, BFF, and W where regeneration leads to rehabilitation of brownfield sites into the medium to long term. Notwithstanding that, there is also potential for direct and indirect negative effects associated with construction and operation of the infrastructure and follow on developments. The Cork City Docklands have significant environmental sensitivities including but not limited to the presence of the Cork Harbour SPA and the Great Island Channel SAC and areas of Annex 1 Habitat outside EU designations. These key projects have / will be subject to the planning process prior to delivery and mitigation will be implemented to address negative effects identified.

Mitigation Proposed:

- **ALL:** The supporting text should state that infrastructure and project proposals are subject to the outcomes of the applicable environmental, planning and consenting processes.
- **ALL:** The enablers should include the need to incorporate carbon sinks and nature restoration proposals into key development areas. Adaptations that build resilience for sea level rise due to climate change risks should also be referenced when targeting development in coastal locations.

8.3.3.7 Key Future Growth Enablers for Limerick

SEA Ref.	2018 Text	2024 Text
L1	Implementation of the Limerick 2030 economic strategy to create modern, city centre office accommodation and a series of transformational city centre public realm projects	Implementation of the updated Limerick 2030 economic strategy to create modern, city centre office accommodation and a series of transformational city centre public realm projects
L2	Complementary further development of the Limerick 2030 plan to include measures to encourage significant inner urban residential regeneration and development, to include the City's Georgian Quarter	Deleted
L3	Extending the ambition of the Limerick 2030 plan to include extension of the City Centre towards Limerick Docks	Deleted
L4	N/A	NEW: Election of the Limerick Directly Elected Mayor to deliver the functions prescribed under the Local Government (Mayor of Limerick) Miscellaneous Provisions Act 2024
L5	Identifying infill and regeneration opportunities to intensify housing and employment development throughout inner suburban areas	Identifying infill and regeneration opportunities to intensify housing and employment development throughout inner suburban areas, including the regeneration of Colbert Station as a sustainable mixed-use city quarter with an enhanced transport interchange
L6	Enabling enhanced opportunities for existing communities as development and diversification occurs, particularly through employment, learning and education support	No change
L7	Progressing the sustainable development of new greenfield areas for housing and the development of supporting public transport and infrastructure, such as at Mungret	No change

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SEA Ref.	2018 Text	2024 Text
L8	The continued expansion of the City's third level institutions and integration with the wider City and region	No change
L9	Provision of a Citywide public transport network, with enhanced accessibility from the City Centre to the National Technological Park, UL and Shannon Airport	Provision of a Citywide Metropolitan public transport network, in accordance with the objectives of the Limerick Shannon Metropolitan Area Transport Strategy (LSMATS) with enhanced accessibility from the City Centre to the National Technological Park, UL and Shannon Airport connecting Colbert Station, UL, Shannon Town Centre and other metropolitan centres.
L10	N/A	NEW: Implementation of Busconnects Limerick to improve bus and sustainable transport services throughout the Limerick City region
L11	Development of a strategic cycleway network with a number of high capacity flagship routes	Development of a strategic cycleway network with a number of high capacity flagship routes Build upon the existing Limerick Metropolitan Cycle Network Study to deliver a comprehensive cycle network for the Limerick Shannon Metropolitan Area.
L12	Enhanced road connectivity to Shannon-Foynes Port, including local by-passes;	No change
L13	Enhanced regional connectivity through improved average journey times by road to Cork and Waterford;	No change
L14	Ensuring that water supply and waste-water needs are met by new national projects to enhance Limerick's water supply and increase waste water treatment capacity;	No change
L15	Improving sustainability in terms of energy, waste management and resource efficiency and water, to include district heating and water conservation.	No change

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
L1	0	0	0	0	0	0	0	0	0
L2 Deleted	0	0	0	0	0	0	0	0	0
L3 Deleted	0	0	0	0	0	0	0	0	0
L4	0	0	0	0	0	0	0	0	0
L5	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
L9	+	0	0	0	+	+	+	0	0
L10	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
L11	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

Assessment and Discussion:

L1 has minor amendments to indicate that the Limerick 2030 strategy has been updated. As such the amendment is considered not significant.

L2 and L3 have been deleted to reflect the updated Limerick 2030 plan that is mentioned in the revised enabler L1. As such the deletion is considered **not significant**.

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Assessment and Discussion:

L4 is a new enabler that relates to the election of the Limerick Directly Elected Mayor to deliver the functions prescribed under the Local Government (Mayor of Limerick) Miscellaneous Provisions Act 2024. As such the amendment is considered not significant.

L5 has been amended to incorporate reference to Colbert Station sustainable mixed-use city quarter with an enhanced transport interchange. Regeneration plans are underway as part of a partnership between the Land Development Agency and Limerick City and County Councils and other stakeholders. The future development of Colbert Station area will focus on optimising brownfield and underutilised areas with direct and indirect positive effects for PHH, MA, LS, W and LandS from regeneration, optimising of brownfield sites and provision of enhanced transport services. Through regeneration, uncontrolled run-off or contamination issues are generally improved upon resulting in positive impacts to LS and W. There is also potential for negative impacts for BFF, LS and W over short to medium term however, where regeneration results in emissions to water or the generation of contaminated material from infill/brownfield sites, disturbance to bat species roosting in vacant and derelict buildings. Development, once sustainable, should result in positive impacts to AQ and CF in the short to medium term as compact settlement growth will target development in areas that are well-served by public transport which will subsequently help reduce car dependency. From a landscape and visual perspective, regeneration generally results in improved visual impacts and restoration of cultural heritage where present and therefore positive impacts for LandS and CH. However, rapid changes due to regeneration may alter the character and identity of a place, sometimes erasing historical or cultural significance thereby negatively impacting CH and LandS. It is therefore, important that the heritage features are restored in a sustainable manner. There are also operational effects e.g., expanded services and the increased frequency of public services generating increased levels of operational noise for adjacent communities which has long-term permanent negative implications for PHH and AQ (i.e. noise). Environmental sensitivities in the area include the Lower Shannon SAC and the River Shannon and River Fergus SPA. The area contains a number of built heritage assets listed on the national inventory of architectural heritage. It is also surrounded by residential areas such as Roxboro and these have associated drinking water abstraction points which would be impacted by development. The Masterplan for the area should include consideration of environmental sensitivities to avoid unnecessary negative effects.

L9 has been amended to include reference to Limerick Shannon Metropolitan Area Transport Strategy (LSMATS) and specific locations that will be connected via the Metropolitan public transport network. The updates reflect the enhanced connectivity sought across the city with direct and indirect positive effects for PHH from the improved accessibility and connectivity and to AQ and CF from the modal shift opportunity such a network presents, moving people away from private car use and the associated tailpipe emissions that brings. This will also have indirect positive effect for PHH. A separate SEA and AA of the LSMATS has been undertaken and appropriate mitigation has been integrated into that to reduce potential for significant effects.

L10 is a new enabler that relates to roll out of the BusConnects programme in Limerick. The BusConnects programme is at an early stage but is currently subject to route selection and public consultation. Similar programmes in Dublin and Cork are at various stages of development, and the process includes route optioneering, followed by identification of Preferred Route Options and statutory consent applications to ABP, which associated EIA and AA processes. This enabler is broadly positive in the short to longer term for Limerick, as a high-quality, high-capacity public transport option is critical to achieve the critical mass needed to change behaviours and move people away from private car use. Such a shift away from private car would be positive for AQ and CF and also HH as it would reduce tailpipe emissions associated with fossil fuels. There is a potential for direct and indirect positive and negative impacts on PHH, BFF, LS, W, AQ, MA, LandS and CH during the construction phase and related to increased dust, noise, travel disruptions, disturbance, loss or fragmentation of habitats, loss of soil resource/soil sealing or hydrogeological effects, pollutant or construction debris run-off, alterations to heritage features/setting and landscape or views. Removal of vegetation impacting negatively on the urban LandS and on BFF reliant on these urban trees have been identified as concerns for residents in BusConnects Dublin. These impacts can be addressed through consultation and project-level mitigation.

L11 has been revised to relate to delivery of a comprehensive cycle network for the Limerick Shannon Metropolitan Area. This is to be supported by the existing Limerick Metropolitan Cycle Network Study that sets out the envisaged cycle network for the Metropolitan Area to 2025. The study further has informed the LSMATS which was subjected to SEA and AA. Development of the cycle network has the potential for positive impacts for PHH, AQ, CF and MA in the short to long term associated with cycling such as improved health and quality of life, increased accessibility, reduced air pollution and increased modal shift away from private cars. There is a potential for direct and indirect negative impacts on PHH, BFF, LS, W, AQ, MA, LandS and CH during the construction including increased dust, noise, travel disruptions, disturbance, loss or fragmentation of habitats and soil compaction, pollutant or construction debris run-off and alterations to landscape character and heritage features. Longer term negative effects can occur for BFF where species sensitive to disturbance are present e.g. birds. Sensitive route is required to avoid these impacts at project level.

Mitigation Proposed:

- **ALL:** The supporting text should state that infrastructure and project proposals are subject to the outcomes of the applicable environmental, planning and consenting processes.

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Assessment and Discussion:

- **ALL:** The enablers should include the need to incorporate carbon sinks and nature restoration proposals into key development areas. Adaptations that build resilience for sea level rise due to climate change risks should also be referenced when targeting development in coastal locations.
- **L6:** It is noted that similar enablers related to sustainable development in greenfield areas have been revised to include 'brownfield areas' such as D2 for Dublin and C2 for Cork. It is therefore recommended that this enabler is revised to include this reference as prioritising infill development into brownfield sites over greenfield sites can offer positive implications for BFF, LS and W.

8.3.3.8 Key Future Growth Enablers for Waterford

SEA Ref.	2018 Text	2024 Text
W1	Delivering the North Quays SDZ regeneration project for integrated, sustainable development together with supporting infrastructure, including a new pedestrian bridge or a pedestrian/public transport bridge over the River Suir	Delivering the North Quays SDZ regeneration project for integrated, sustainable development together with supporting infrastructure, including a new pedestrian bridge or a pedestrian/public transport bridge over the River Suir to include an integrated transport hub, the relocation of Waterford train station to a more convenient location, and a new sustainable transport bridge
W2	Identifying infill and regeneration opportunities to intensify housing and employment development throughout city centre and inner suburban areas	No change
W3	Enabling enhanced opportunities for existing communities as development and diversification occurs, particularly through employment, learning and education support	No change
W4	Progressing the sustainable development of new greenfield areas for housing and the development of supporting public transport and infrastructure	No change
W5	Public realm and urban amenity projects, focused on streets and public spaces, particularly in the city centre and inner urban area in support of urban intensification	No change
W6	The development and expansion of the City's third level institution and integration with the City and region	The development and expansion of the City's third level institution South East Technological University (SETU) formed in 2022 from the amalgamation of the two institutes of technology in the region – Waterford IT and IT Carlow and its integration with the City and region
W7	Provision of Citywide public transport and strategic cycleway networks	Provision of Citywide public transport in accordance with the Waterford Metropolitan Area Transport Strategy (WMATS), including the implementation of BusConnects Waterford and strategic cycleway networks
W8	Extension of the Deise greenway to link WIT to the City Centre	Deleted
W9	Enhanced regional connectivity through improved average journey times by road to Cork, Limerick and ports within the region	No change
W10	Ensuring that water supply and waste-water needs are met by new national projects to enhance Waterford's water supply and increase waste water treatment capacity	No change
W11	Improving sustainability in terms of energy, waste management and resource efficiency	No change

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and water, to include district heating and water conservation

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
W 1	?/-	?/-	?/-	?/-	?/-	?/-	?/-	?/-	?/-
W 6	0	0	0	0	0	0	0	0	0
W 7	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
W 8 Deleted	0	0	0	0	0	0	0	0	0

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

Assessment and Discussion:

W1 has been amended to clarify that the sustainable development will include for an integrated transport hub, the relocation of Waterford train station and a new sustainable transport bridge. It is not clear from the enabler, if this is intended to involve active travel rather than being a road transport bridge. It is also not clear what the proposals for the relation of the train station would involve. There is potential for significant negative effects associated with such a relocation depending on the location chosen to host a new station. In any event, it is likely to have negative effects in the short to medium term on PHH from changes to access and loss of transport options and increased journey times, LS and W from possible mobilisation of contaminants associated with rail ballast etc. BFF from removal and disturbance of habitats, loss of built heritage features impacting CH and LandS. A Masterplan for the relocation should be advanced for consultation. All development proposals required consent are subject to the applicable environmental and planning processes.

W6 has been amended to incorporate specific references to third level institution. No significant effects.

W7 has been updated to refer to the provision of public transport in accordance with the WMATS, which was subject to an SEA and AA. It is an objective of that strategy to roll out of the BusConnects programme in Waterford. Similar programmes in Dublin and Cork are at various stages of development, and the process includes route optioneering, followed by identification of Preferred Route Options and statutory consent applications to ABP, which associated EIA and AA processes. This enabler is broadly positive in the short to longer term for Waterford, as a high-quality, high-capacity public transport option is critical to achieve the critical mass needed to change behaviours and move people away from private car use. Such a shift away from private car would be positive for AQ and CF and also HH as it would reduce tailpipe emissions associated with fossil fuels. There is a potential for direct and indirect positive and negative impacts on PHH, BFF, LS, W, AQ, MA, LandS and CH during the construction phase and related to increased dust, noise, travel disruptions, disturbance, loss or fragmentation of habitats, loss of soil resource/soil sealing or hydrogeological effects, pollutant or construction debris run-off, alterations to heritage features/setting and landscape or views. Removal of vegetation impacting negatively on the urban LandS and on BFF reliant on these urban trees have been identified as concerns for residents in BusConnects Dublin. These impacts can be addressed through consultation and project-level mitigation.

W8 has been deleted to reflect that the Deise greenway is in operation. No significant effects from this deletion.

Mitigation Proposed:

- **ALL:** The supporting text should state that infrastructure and project proposals are subject to the outcomes of the applicable environmental, planning and consenting processes.
- **ALL:** The enablers should include the need to incorporate carbon sinks and nature restoration proposals into key development areas. Adaptations that build resilience for sea level rise due to climate change risks should also be referenced when targeting development in coastal locations.
- **W1 :** This enabler could be clarified as to whether it is intended to involve active travel rather than being a road transport bridge and what the proposals for the train station include.
- **W4:** It is noted that similar enablers related to sustainable development in greenfield areas have been revised to include 'brownfield areas' such as D2 for Dublin and C2 for Cork. However, it is recommended that this enabler is revised to include this reference as prioritising infill development into brownfield sites over greenfield sites can offer positive implications for BFF, LS and W.

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- **ALL:** The design and operation of development should apply Sustainable Urban Drainage Systems (SuDS) principles and incorporate urban drainage Nature Based Solutions (NbS) with reference to up-to-date guidance¹¹⁸.

8.3.4 Chapter 4 – Making Stronger Urban Places

NPO	2018 Objective	2024 Objective
12	Ensure the creation of attractive, liveable, well designed, high quality urban places that are home to diverse and integrated communities that enjoy a high quality of life and well-being.	No change.
13	Develop cities and towns of sufficient scale and quality to compete internationally and to be drivers of national and regional growth, investment and prosperity.	No change.
14	Regenerate and rejuvenate cities, towns and villages of all types and scale as environmental assets, that can accommodate changing roles and functions, increased residential population and employment activity and enhanced levels of amenity and design quality, in order to sustainably influence and support their surrounding area	Regenerate and rejuvenate cities, towns and villages of all types and scale as environmental assets that can accommodate changing roles and functions, increased residential population and employment activity, enhanced levels of amenity and design and placemaking quality, in order to sustainably influence and support their surrounding area to ensure progress toward national achievement of the UN Sustainable Development Goals.
15	Apply a tailored approach to urban development, that will be linked to the Rural and Urban Regeneration and Development Fund, with a particular focus on:- Dublin; the four Cities of Cork, Limerick, Galway and Waterford; Strengthening Ireland's overall urban structure, particularly in the Northern and Western and Midland Regions, to include the regional centres of Sligo and Letterkenny in the North-West, Athlone in the Midlands and cross-border networks focused on the Letterkenny-Derry North-West Gateway Initiative and Drogheda-Dundalk-Newry on the Dublin-Belfast corridor; Encouraging population growth in strong employment and service centres of all sizes, supported by employment growth; Reversing the stagnation or decline of many smaller urban centres, by identifying and establishing new roles and functions and enhancement of local infrastructure and amenities; Addressing the legacy of rapid unplanned growth, by facilitating amenities and services catch-up, jobs and/or improved sustainable transport links to the cities, together with a slower rate of population growth in recently expanded commuter settlements of all sizes; In more self-contained settlements of all sizes, supporting a continuation of balanced population and employment growth	Apply a tailored approach to urban development, that will be linked to the Rural and Urban Regeneration and Development Funds, with a particular focus on: Dublin; The four Cities of Cork, Limerick, Galway and Waterford; Strengthening Ireland's overall urban structure, particularly in the Northern and Western and Midland Regions, to include the regional centres of Sligo and Letterkenny in the North-West, Athlone in the Midlands and cross-border networks focused on the Letterkenny-Derry North-West Gateway Initiative City Region and Drogheda-Dundalk-Newry on the Dublin-Belfast corridor; Encouraging population growth in strong employment and service centres of all sizes, supported by employment growth; Reversing the stagnation or decline of many smaller urban centres, by identifying and establishing new roles and functions and enhancement of local infrastructure and amenities; Addressing the legacy of rapid unplanned growth, by facilitating amenities and services catch-up, jobs and/or improved sustainable transport links to the cities, together with a slower rate of population growth in recently expanded commuter settlements of all sizes;

¹¹⁸ DHLGH (2024) *Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas – Water Sensitive Urban Design*. Best Practice Interim Guidance Document

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NPO		2018 Objective		2024 Objective																																																																														
16	To ensure that the targeted pattern of population growth of Ireland's cities to 2040 is in accordance with the targets set out in Table 4.1	<table><tr><th>City</th><th>Population 2016</th><th colspan="2">Population Growth to 2040²⁷</th><th>Minimum Target Population 2040</th></tr><tr><th></th><th></th><th>% Range</th><th>People</th><th></th></tr><tr><td>Dublin - City and Suburbs</td><td>1,173,000</td><td>20-25%</td><td>235,000 - 293,000</td><td>1,408,000</td></tr><tr><td>Cork - City and Suburbs</td><td>209,000</td><td>50-60%</td><td>105,000 - 125,000</td><td>314,000</td></tr><tr><td>Limerick - City and Suburbs</td><td>94,000</td><td>50-60%</td><td>47,000 - 56,000</td><td>141,000</td></tr><tr><td>Galway - City and Suburbs</td><td>80,000</td><td>50-60%</td><td>40,000 - 48,000</td><td>120,000</td></tr><tr><td>Waterford - City and Suburbs</td><td>54,000</td><td>50-60%</td><td>27,000 - 32,000</td><td>81,000</td></tr></table>		City	Population 2016	Population Growth to 2040 ²⁷		Minimum Target Population 2040			% Range	People		Dublin - City and Suburbs	1,173,000	20-25%	235,000 - 293,000	1,408,000	Cork - City and Suburbs	209,000	50-60%	105,000 - 125,000	314,000	Limerick - City and Suburbs	94,000	50-60%	47,000 - 56,000	141,000	Galway - City and Suburbs	80,000	50-60%	40,000 - 48,000	120,000	Waterford - City and Suburbs	54,000	50-60%	27,000 - 32,000	81,000	<table><tr><th>City</th><th>Population 2022</th><th>2018 NPF</th><th colspan="2">Population Growth to 2040²⁰</th><th>Minimum Target</th></tr><tr><th></th><th></th><th>% Range 2016-2040</th><th>% Range 2022-2040</th><th>People</th><th></th></tr><tr><td>Dublin - City and Suburbs</td><td>1,263,000</td><td>20-25%</td><td>20-25%</td><td>296,000</td><td>1,560,000</td></tr><tr><td>Cork - City and Suburbs</td><td>223,000</td><td>50-60%</td><td>40%</td><td>96,000</td><td>320,000</td></tr><tr><td>Limerick - City and Suburbs</td><td>102,000</td><td>50-60%</td><td>40%</td><td>44,000</td><td>150,000</td></tr><tr><td>Galway - City and Suburbs</td><td>86,000</td><td></td><td>40%</td><td>36,000</td><td>122,000</td></tr><tr><td>Waterford - City and Suburbs</td><td>60,000</td><td></td><td>40%</td><td>28,000</td><td>88,000</td></tr></table>		City	Population 2022	2018 NPF	Population Growth to 2040 ²⁰		Minimum Target			% Range 2016-2040	% Range 2022-2040	People		Dublin - City and Suburbs	1,263,000	20-25%	20-25%	296,000	1,560,000	Cork - City and Suburbs	223,000	50-60%	40%	96,000	320,000	Limerick - City and Suburbs	102,000	50-60%	40%	44,000	150,000	Galway - City and Suburbs	86,000		40%	36,000	122,000	Waterford - City and Suburbs	60,000		40%	28,000	88,000
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17	<p>In each Regional Assembly area, settlements not identified in Policy 2a or 2b of this Framework, may be identified for significant (i.e., 30% or more above 2016 population levels) rates of population growth at regional and local planning stages, provided this is subject to:</p> <p>Agreement (regional assembly, metropolitan area and/or local authority as appropriate);</p> <p>Balance with strategies for other urban and rural areas (regional assembly, metropolitan area and/or local authority as appropriate), which means that the totality of planned population growth has to be in line with the overall growth target.; and</p> <p>A co-ordinated strategy that ensures alignment with investment in infrastructure and the provision of employment, together with supporting amenities and services.</p>	<p>In each Regional Assembly area, settlements not identified in Policy 4 or 5 of this Framework, may be identified for significant (i.e., 30% or more above 2022 population levels) rates of population growth at regional and local planning stages, provided this is subject to:</p> <p>Agreement (regional assembly, metropolitan area and/or local authority as appropriate);</p> <p>Balance with strategies for other urban and rural areas (regional assembly, metropolitan area and/or local authority as appropriate), which means that the totality of planned population growth has to be in line with the overall growth target; and</p> <p>A co-ordinated strategy that ensures alignment with the delivery of investment in infrastructure and the provision of employment, together with supporting amenities and services.</p>																																																																																
18	Regional and Local Authorities to identify and quantify locations for strategic employment development in the cities identified in Table 4.1.	No change.																																																																																
19	Regional and Local Authorities to identify and quantify locations for strategic employment development, where suitable, in urban and rural areas generally.	No change.																																																																																
20	In meeting urban development requirements, there will be a presumption in favour of development that can encourage more people and generate more jobs and activity within existing cities, towns and villages, subject to development meeting appropriate planning standards and achieving targeted growth.	No change.																																																																																
21	The Government will establish a National Regeneration and Development Agency to work with local authorities, other public bodies and capital spending departments and agencies to co-ordinate and secure the best use of	The Government will support the LDA, in association with Local Authorities, to fulfil its statutory mandate to deliver a significant number of homes on State lands in major mixed tenure																																																																																

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NPO	2018 Objective	2024 Objective
	public lands, investment required within the capital envelopes provided in the National Development Plan and to drive the renewal of strategic areas not being utilised to their full potential. The Government will consider how best to make State lands available to such a body to kick-start its development role and to legislate for enhanced compulsory purchase powers to ensure that the necessary transformation of the places most in need of regeneration can take place more swiftly and effectively.	developments, with a particular focus on brownfield and infill urban sites in the five main cities and regional centres as a priority.
22	In urban areas, planning and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high-quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected.	In urban areas, planning and related standards, including in particular building height and car parking will be based on performance criteria that seek to achieve well-designed high-quality outcomes in order to achieve targeted growth. These standards will be subject to a range of tolerance that enables alternative solutions to be proposed to achieve stated outcomes, provided public safety is not compromised and the environment is suitably protected.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 14	+	+	+	+	+	+	+	+	+
NPO 15	0	0	0	0	0	0	0	0	0
NPO 16	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 17	0	0	0	0	0	0	0	0	0
NPO 21	+/-	+/-	+/-	+/-	+/-	+/-	+/-	0/+	+/-
NPO 22	+	+	+	+	+	+	+	+	+

Key: PHH: Population & Human Health; BFF: Biodiversity, Flora & Fauna; LS: Land & Soils/Sediments; W: Water; AQ: Air Quality; CF: Climatic Factors; MA: Material Assets; CH: Cultural Heritage; LandS: Landscape.

Assessment and Discussion:

NPO 14 has been revised with minor amendments and a specific reference to achieving the UN Sustainable Development Goals (SDG). The inclusion of a direct link to Ireland's implementation and achievement of the goals will have indirect positive impacts for all environmental receptors as the 17 goals and their associated targets address issues of sustainability, clean water, clean energy, climate, poverty and health among others.

NPO 15 and NPO 17 have been revised with minor amendments for clarification purposes. No significant effects are anticipated from these amendments.

Policy **NPO16** sets targets for the population growth of Ireland's cities; the population growth figures are updated and increased compared to those assessed within the original NPF. NPO 16 expands upon the growth identified in the policies of Chapter 2. NPO16 will result in mixed outcomes for all environmental receptors. Positive effects are predicted in terms of PHH, MA, AQ and CF as a result of directing this additional population growth toward the 5 cities and suburbs where consolidated growth can be accommodated and integrated services can also be directed. This will optimise opportunities to align with employment (PHH), optimise use of existing infrastructure and infill opportunities (LS, MA and W) and harness the critical mass needed to deliver sustainable transport solutions that facilitate modal shift away from car ownership and private car journeys, reducing polluting emissions as a result (AQ, PHH, and CF). These positive effects however will be into the medium to long term as much of this infrastructure required to support consolidation is only in planning and will take significant time to deliver e.g., DART+ programme, Metro. In the interim, the growth will add to existing challenges for transport, energy, water/wastewater, education, health and social infrastructure which may lead to, or exacerbate inequity and disadvantage in cities and suburbs leading to short to medium term negative effects for PHH, MA, AQ, and CF. Indirect positive effects are also noted for BFF, LS, LandS and CH by consolidating growth to the cities. Targeted and consolidated growth within existing urban areas will reduce sprawl and protect greenfield areas and assets outside settlement boundaries which has potential for indirect positive effects for all receptors as a result. Positive effects are also possible for BFF, LS and W where infill development is prioritised over the development of greenfield sites and further urban sprawl outward into open space areas. Where growth within the cities does not align to capacity in services in the short to medium term this is anticipated to result in cumulative negative effects for PHH, MA, W and

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Assessment and Discussion:

BFF, AQ and CF as further consolidation is achieved. The proposed growth in the cities must be cognisant of the capacity of these urban areas to absorb the development needed to underpin such growth figures. Growth must align with the phasing of critical services with clear strategies linking growth to advanced or as a minimum parallel delivery of the capacity needed. The accommodation of the proposed growth also has potential for negative effects for all environmental receptors associated with increased housing and other related facilities in the form of increased dust, noise, traffic; air emissions, disturbance, loss or fragmentation of habitats; soil sealing, hydrogeological effects; run-off; changes to heritage features/setting or landscape and views. The necessary infrastructure could also put pressure on flood zone areas.

Development associated with leisure and recreation alongside other more diffuse recreational activities *e.g.*, walking, cycling etc. are identified as existing pressures to biodiversity; including in those cities and regions where the majority of the planned population and employment growth will be targeted. Examples of heavily utilised areas include the Malahide Estuary, Wicklow Mountains National Park, Tramore Dunes, Great Island Channel, Galway Bay, and the Barrow and Nore Rivers. As lower tiers of planning seek to accommodate the population growth identified in the NPF, active consideration is needed on how to accommodate for recreation and access for the expanding population in order to avoid negative effects on PHH, BFF, LandS, W and MA from lack of suitable outlets and over use and intensification of use of existing areas, disturbance of habitats and species, deterioration of environmental parameters, loss of biodiversity support features such as resting areas. Proactive planning for this important strand of sustainable communities can ensure that sufficient formal and informal greenspace (including natural and accessible green space) is planned and delivered. This could be achieved through regional and local recreation strategies which identify the existing recreation infrastructure and its suitability in terms of high to low capacity depending on any environmental sensitivities. It could also be included as part of green and blue infrastructure strategies and County Biodiversity Action Plans. A lack of such facilities can lead to anti-social behaviour and deterioration in overall wellbeing of communities.

NPO 21 has been significantly updated to reflect the establishment of the Land Development Agency (LDA) which has been created to coordinate land within public control to provide affordable and social homes and build communities. The LDA has already been involved in key developments in all 5 cities as noted under chapter 3 of the NPF and the areas referenced are assessed in section 8.3.3 of this report. It is noted that the LDA has a sustainability strategy which includes provision of lower carbon homes and provision of public transport. In addition, existing masterplans have addressed protection of built and natural heritage.

The development areas under the remit of the LDA generally focus on optimising brownfield and underutilised areas with direct and indirect positive effects for PHH, MA, LS, W CH, and LandS from regeneration and optimising of brownfield sites. Environmental sensitivities vary from site to site and robust master planning is required to inform optimal design and development principles on a site by site basis if negative effects on the receiving environment are to be avoided. Flood risk and traffic management in particular have potential for significant negative effects for existing communities as a result of these infill developments. These aspects can in turn indirectly impact other receptors negatively as a result of emissions to air and water and deterioration in environmental quality. Issues of built and natural heritage can also lead to significant effects as a result of loss and deterioration of habitat and features. Development of brownfield sites, urban densification, increased emissions to air and water as well as increased demand on municipal services means there is potential to negatively impact on PHH, BFF, LS, W, AQ, MA and LandS. Sites which have historical industrial usage and may have contaminated ground/soil or legacy waste issues and as such have the potential to generate hazardous wastes/contaminated soils when they are regenerated. However, the positive impacts of this can include remediation and reuse of the site. Notwithstanding the potential for negative effects, pro-active land management can support protection and conservation of biodiversity and the conservation of wild areas that act as sources/ sinks for native flora and fauna and support nature restoration *e.g.*, reverse infilled wetlands and restore them as habitat for biodiversity, where possible.

NPO 22 has been amended, via deletion of the second part of the objective: The deleted text removes flexibility for local conditions / solutions. While it is acknowledged that original text included reference to public safety and environmental protection, this flexibility is subjective and may lead to differing outcomes based on subjective application. As such, the removal of the flexibility and refocus on application of planning and related standards is considered positive for all environmental receptors as it ensures consistency and transparency in planning decisions.

Mitigation Proposed:

- **NPO 16:** Proactive planning for recreation and access facilities should be encouraged through all tiers of planning to provide for sustainable communities while also protecting environmental and ecological receptors from harm.
- **NPO21:** The NPO should include specific reference to environmental protection and sustainable development. It should also reference the opportunity for the development of these public lands to support related government commitments and policy on biodiversity, soils and water quality as a priority, in a manner which supports Ireland's progress in achieving the UN Sustainable Development Goals (SDGs) and the 2030 Agenda for Sustainable Development.

8.3.5 Chapter 5 – Planning for Diverse and Rural Places

Revisions to Chapter 5 take the form of renewed commitment by Government to support rural and island communities through provision of adequate and suitable services to allow communities to thrive. This includes transport options, broadband etc. The chapter includes reference to new Government Policy documents in the form of Action Plan for Rural Development 2021 - 2025 and Our Living Islands policy document and Action Plan 2023 – 2026 which set out the Government vision for rural and island communities and recognises the social, cultural and economic backdrop against which the NPF is set. A key recognition of the revisions is the need for policy alignment across Government.

The following changes have been made to the National Policy Objectives:

NPO	2018 Objective	2024 Objective
23	Protect and promote the sense of place and culture and the quality, character and distinctiveness of the Irish rural landscape that make Ireland's rural areas authentic and attractive as places to live, work and visit. The Action Plan for Rural Development will support this objective up to 2020; thereafter a review of the Action Plan will be undertaken to ensure continued alignment and consistency with the National Policy Objectives of this Framework.	Protect and promote the sense of place and culture and the quality, character and distinctiveness of the Irish rural landscape including island communities that make Ireland's rural areas authentic and attractive as places to live, work and visit. Any successor policy documents relating to national policy for rural areas and the islands will ensure continued alignment and consistency with the National Policy Objectives of this Framework.
24	Support the sustainable development of rural areas by encouraging growth and arresting decline in areas that have experienced low population growth or decline in recent decades and by managing the growth of areas that are under strong urban influence to avoid over-development, while sustaining vibrant rural communities	No change
25	Target the reversal of rural decline in the core of small towns and villages through sustainable targeted measures that address vacant premises and deliver sustainable reuse and regeneration outcomes ²⁸ .	No change to objective but additional text added as footnote: Refer to Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities
26	Enhance, integrate and protect the special physical, social, economic and cultural value of built heritage assets through appropriate and sensitive use now and for future generations	Enhance, integrate and protect the special physical, environmental , economic and cultural value of built heritage assets, including streetscapes, vernacular dwellings and other historic buildings and monuments , through appropriate and sensitive investment and conservation .
27	Support the proportionate growth of and appropriately designed development in rural towns that will contribute to their regeneration and renewal, including interventions in the public realm, the provision of amenities, the acquisition of sites and the provision of services.	Continue to support the proportionate growth of and appropriately designed development in rural towns that will contribute to their regeneration and renewal, including interventions in the public realm, the provision of amenities, the acquisition of sites and the provision of services.
28	Develop a programme for 'new homes in small towns and villages' with local authorities, public infrastructure agencies such as Irish Water and local communities to provide serviced sites with appropriate infrastructure to attract people to build their own homes and live in small towns and villages	Continue to support programmes for 'new homes in small towns and villages' with local authorities, public infrastructure agencies such as Uisce Éireann and local communities to provide serviced sites with appropriate infrastructure to attract people to build their own homes and live in small towns and villages.
29	Ensure, in providing for the development of rural housing, that a distinction is made between areas under urban influence, i.e., within the commuter catchment of cities and large towns and centres of employment, and elsewhere: In rural areas under urban influence, facilitate the provision of single housing in the countryside based on the core consideration of demonstrable economic or social need to live in a rural area and siting and	No change

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NPO	2018 Objective	2024 Objective
	design criteria for rural housing in statutory guidelines and plans, having regard to the viability of smaller towns and rural settlements; In rural areas elsewhere, facilitate the provision of single housing in the countryside based on siting and design criteria for rural housing in statutory guidelines and plans, having regard to the viability of smaller towns and rural settlements.	
30	Project the need for single housing in the countryside through the local authority's overall Housing Need Demand Assessment (HNDA) tool and county development plan core strategy processes	No change
31	Facilitate the development of the rural economy through supporting a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.	Facilitate the development of the rural economy, in a manner consistent with the national climate objective , through supporting a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting biodiversity and the natural landscape and built heritage which are vital to rural tourism.
32	Support and facilitate delivery of the National Broadband Plan as a means of developing further opportunities for enterprise, employment, education, innovation and skills development for those who live and work in rural areas.	No change but relocated within the chapter.
33	Enhance the competitiveness of rural areas by supporting innovation in rural economic development and enterprise through the diversification of the rural economy into new sectors and services, including ICT-based industries and those addressing climate change and sustainability.	No change
34	N/A	NEW: Support the agri-food industry in promoting Ireland's continued food security in a manner that ensures economic, environmental, and social sustainability while ensuring progress in achieving targets in the National Climate Action Plan and the River Basin Management Plan.
35	Facilitate tourism development and in particular a National Greenways, Blueways and Peatways Strategy, which prioritises projects on the basis of achieving maximum impact and connectivity at national and regional level.	Continue to facilitate tourism development and in particular the Strategy for the Future Development of National and Regional Greenways, and a Blueways and Peatways Strategy, which prioritises projects on the basis of their environmental sustainability , achieving maximum impact and connectivity at national and regional level while ensuring their development is compliant with the National Biodiversity Action Plan, the national climate change objective and requirements for environmental assessments.
36	The Department of Rural and Community Development, the Department of Agriculture, Food and the Marine, and other relevant Departments and Agencies will continue to invest in rural Ireland, including through the Rural Regeneration and Development Fund, and will work together to establish a mechanism to co-ordinate structures for	No change but relocated within the chapter.

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NPO	2018 Objective	2024 Objective
	funding rural development to align with other national strategies.	

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 23	+/-	-	-	-	-	-	+/-	+/-	+/-
NPO 25	0	0	0	0	0	0	0	0	0
NPO 26	+	-	0	0	0	0	+	+	+
NPO 27	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 28	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 31	+/-	+/-	+/-	+/-	-	+/-	+/-	+/-	-
NPO 34	+/-	-	+/-	-	-	-	+/-	+	0
NPO 35	+/-	+/-	+/-	+/-	+	+	+	+/-	+/-

Key: PHH: Population & Human Health; BFF: Biodiversity, Flora & Fauna; LS: Land & Soils/Sediments; W: Water; AQ: Air Quality; CF: Climatic Factors; MA: Material Assets; CH: Cultural Heritage; LandS: Landscape.

Assessment and Discussion:

NPO 23 has deleted specific reference to the Action Plan for Rural Development. The amended policy replaces a reference to any successor policy documents needing to align with the NPO of the framework. The supporting text recognises the importance of policy alignment across Government to deliver on the aims and objectives of the NPF including the rural development policy *Our Rural Future 2021-2025*, and the islands policy *Our Living Islands: the National Islands Policy 2023-2033*, both of which were published by the Department of Rural and Community Development (DRCD). Requiring alignment of Government policy in the NPO is broadly positive for PHH, CH, LandS and MA as it supports Government commitment to providing reliable and realistic sustainable mobility options and a focus on regeneration, repopulation and development of rural towns and villages including reuse of vacant properties with reference to the Action Plan and Island policy. The nature of the supporting infrastructure referred to in the supporting text can however have direct and indirect negative impacts for all environmental receptors as a result of construction and operation e.g., reuse of vacant dwellings can lead to negative impacts on BFF and CH as a result of disturbance of the property during refurbishment (disturbance of features or materials (CH) or disturbance of fauna using the area e.g., bats (BFF)). Provision of transport infrastructure can have negative effects from emissions to LS, W, AQ, and CF from vehicles, disturbance to biodiversity(BFF), increased flood risk(W and MA), land take and land use change (LS, LandS and MA). Application of the SEA and AA processes to successor policy documents relating to national policy for rural areas and the islands will assist in avoiding significant negative effects.

NPO25 now includes a footnote referring to the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities¹¹⁹. As with NPO23, alignment of Government policy is a broadly positive addition to the objective. These guidelines have undergone full SEA and AA processes to address potential for significant effects. No significant effects anticipated in the NPF from inclusion of the reference.

NPO26 has been revised to include reference to environmental value of built heritage and to provide examples of the built heritage assets to which the policy relates. A reference to sensitive investment and conservation is also included. There will be direct positive impacts on PHH, CH, MA and LandS in relation to NPO26. The quality and character of our national built heritage as a non-renewable resource is of direct benefit to Ireland as a nation, both for the rural and urban areas. As such it is important to ensure the continued enhancement and protection of our built assets and that they are appropriately utilised. Allowing for appropriate usage, our built heritage can contribute to consolidation within urban areas thus having positive impacts on MA. The reference to environmental value is also broadly positive however it does not clarify what is meant by the reference and this may lead to ambiguity. Heritage assets can provide important support for BFF in particular e.g., birds and bats and this should be acknowledged in the supporting text for this NPO to provide context. Heritage assets could be designated as National or European sites in their own right or be located within or be connect to National or European sites. Therefore, any activities to “enhance, integrate and protect” the asset(s) could result in adverse effects on BFF.

NPO27 acknowledges the ongoing support in place through schemes such as the Ready to Build Scheme which allows local authorities to make serviced sites in towns and villages available to potential individual purchasers (self-builders) for a discounted market value. This fosters concentrated growth within a central location which will promote good accessibility and improvement of services which can in turn reduce the need for unnecessary journeys to avail of

¹¹⁹ The Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities has been subject to separate SEA and AA processes (available on gov.ie).

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services outside rural towns with indirect positive impacts for CF and AQ from reduced transport needs and positive impacts for PHH, CH, MA and LandS from improved local facilities and investments in public realm and services. Reference is made in the supporting text to Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities, particularly in relation to the size, scale and form of rural housing to ensure that a suburban or high-density urban approach is not applied within a rural setting. As with any infrastructural development there is potential short to medium term negative impacts on all environmental receptors as a result of construction activities: sediment release and chemical pollution (W and LS); disturbance of habitats and species (BFF); emissions to air from construction traffic and dust (PHH, AQ and CF); damage to built heritage (CH and LandS); and changes to land use and landscape character (LandS).

As with the revisions to NPO27, those in **NPO28** relate to continued support for provision of new homes in adequately serviced sites in small towns and villages. Reference is made in the supporting text to Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities, particularly in relation to the size, scale and form of rural housing to ensure that a suburban or high-density urban approach is not applied within a rural setting. This will have positive effects for PHH, MA and CH by ensuring access to suitable housing to support all sectors in society, ensuing resilient communities can be supported for future generations. The reference to suitable serviced sites will have direct positive effects for PHH, W and MA as it ensures energy, waste, water and wastewater provisions will support these developments. Indirect positive effects are also anticipated for BFF, LS and W where services are provided which reduce the risks associated with one off housing and domestic waste water treatment systems. Notwithstanding that, the reference to *appropriate infrastructure* is unclear and should be clarified to ensure equity for communities on a national scale. The policy will also result in positive effects for LandS, LS and MA as a result of reducing the spread of one off housing in rural areas. This protects greenfield areas from development and also allows consolidation of services. Negative effects of the continued support for this policy relate to the availability of broadband. Without adequate and reliable provision, the risk of creating commuter culture as people travel distances to access necessary services. This would have negative effects on AQ and CF in particular with indirect negative effects for PHH. As with any infrastructural development there is potential short to medium term negative impacts on all environmental receptors as a result of construction activities: sediment release and chemical pollution (W and LS); disturbance of habitats and species (BFF); emissions to air from construction traffic and dust (PHH, AQ and CF); damage to built heritage (CH and LandS); and changes to land use and landscape character (LandS).

The development of the rural economy referenced under **NPO31** continues to be positive for PHH, CH and MA as it creates the circumstances to support job creation in rural areas and become a key enabler to rejuvenating rural towns and villages, sustaining vibrant rural communities and reversing population decline. The modification proposed to **NPO31** includes the addition of text stating the need for development of the rural economy to be in a manner consistent with the national climate objective and inclusion of a specific reference to biodiversity (assumed to include soil, aquatic and terrestrial). This is directly positive for CF and BFF, W and LS in particular. The rural economy can be quite diverse and new and existing sectors have the potential for negative impacts for all environmental receptors depending on the nature and scale of the development activities and the sensitivities of the receiving environment. The right activity in the right place is therefore an essential consideration for long term sustainable economies if negative impacts are to be avoided. Sensitivities may include waterbodies, particularly the ones at high risk from pressures including agriculture, forestry, aquaculture etc., transboundary air/ammonia emissions, protected landscapes and views, proximity to residential development, land uses and protected and local biodiversity. Notwithstanding this it is unclear how the broad brush support for all mentioned activities can be achieved in a manner consistent with the national climate objective or in compliance with EU and national legislation and commitments to protect the environment. The evidence base points to water quality decline, a biodiversity crisis and a climate crisis. The broad brush support in NPO 31 does not acknowledge these issues raised in successive EPA state of the environment reporting. As such negative effects for BFF, W, LS, AQ, CF and LandS cannot be ruled out from this NPO.

NPO34 is a new NPO which recognises the importance of the agri-food industry in promoting Ireland's continued food security in a manner that ensures economic, environmental, and social sustainability. Supporting text relating to Foodwise 2025 has been removed and replaced with text relating to Food Vision 2030 Strategy. Inclusion of a specific policy on agri-food is positive for PHH and MA in the context of support for that sector and the economic benefits it provides as well as benefits for LS in recognising the importance of agricultural land. The agri-food sector is recognised as playing an integral part in Ireland's economy and as Ireland's largest indigenous industry, contributing 165,000 direct jobs and generating 9% of merchandise exports in 2023. It is also positive for CH in the context of support of indigenous industries which are culturally significant for many communities around the country. However, there are direct and indirect negative impacts associated with certain aspects of the sector which, despite references to sustainability, remain a challenge notably for CF, W and BFF. The EPA report that the agriculture sector was directly responsible for 38.4% of national Greenhouse Gases (GHGs) emissions in 2022. These were associated with livestock, manure management and nitrogen fertiliser. Agriculture is also identified as the key pressure for water quality and Ireland's compliance with the WFD objectives. The last EPA water quality reporting for the 2023 period indicates that nitrogen pollution remains a significant issue primarily attributable to intensive agricultural activities on freely draining soils particularly in the east, southeast and south of the country. Impacts are from high levels of nutrients (particularly phosphorus and nitrogen); altered river morphology associated with livestock access and land drainage practices and also sediment runoff which has direct negative implications for W and indirect negative implications for PHH, MA and BFF. Loss of wild areas, changes in land use, monocultures of crops, increased use of chemical fertilisers, improper management of livestock manure, habitat destruction are also identified as pressures on BFF and LS and indirectly on AQ, CF and W also. There

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is a potential of negative effects for PHH and MA in the short to medium term and potential long term negative implications for BFF, LS, W, and CF if environmental considerations are not prioritised. This includes better education on measures to reduce pollution and greater emphasis on enforcement where bad practice is recurring. Monitoring of the Food Vision 2030 Strategy implementation in the context of EPA water and climate monitoring results will be important to determine if actions are actually sustainable on the ground. It is noted that the policy wording was updated to include additional reference to *ensuring progress in achieving targets in the National Climate Action Plan and the River Basin Management Plan* during iterative assessment with the Plan team.

NPO35 has been updated to include specific reference to the Strategy for the Future Development of National and Regional Greenways, and a separate Blueways and Peatways Strategy. The benefits of this type of infrastructure is well recorded in terms of rural economies, bringing people into rural towns and villages to avail of services including bike hire, accommodation and food and beverage services that can provide high quality tourism assets. The NPO will have indirect positive effects for PHH and MA in terms of these employment and economic benefits. It also promotes active travel with positive effects for AQ and CF and PHH arising from the modal shift through the provision of walking and cycling routes. The provision of the facilities can also link landscapes and built heritage of significance, promoting its preservation through active engagement and use of the assets. The success of the Waterford Greenway is well recognised and should be an important evidence base to inform future similar proposals. As noted previously with linear infrastructure there is potential for both direct and indirect negative impacts on a range of receptors. This can arise for PHH as a result of increased access to local properties passed by the schemes, loss of parking and / or footpaths and cycle paths. For BFF and W impacts occur through permanent loss of habitats and disturbance of species including birds, bats, otters, badgers (many protected under national and EU law) along routes which are often along biodiversity rich abandoned transport corridors and introduction of artificial lightening. Alteration to river morphology to deliver “designed” ways is also a pathway for impact on water dependant habitats and species. Spread of invasive species can also impact both terrestrial and aquatic environments. CH and LandS negative effects can arise through alteration of heritage features or changes to curtilage impacting on heritage landscape e.g. light pollution. It is to be noted that the referenced strategy for greenway development was not subjected to SEA or AA processes and as such many of these impact pathways have not been considered until planning permissions for these facilities are made, limiting the opportunity to avoid impacts through robust constraints analysis, route selection and design. The strategy does not include any reference to the National Biodiversity Action Plan however it is noted that NPO35 has been updated as a result of SEA / AA mitigation discussions to state that it must ensure alignment with the relevant NBAP and recognises of the need to integrate significant environmental considerations as part of support given in the NPF. Furthermore it should reflect the importance of monitoring existing facilities to promote continuous improvements. Potential for positive transboundary impacts with Northern Ireland where infrastructure can be linked / shared however the impacts in relation to BFF, W, LandS and others mentioned above would need to be carefully addressed in any facilitates directly or indirectly impacting Northern Ireland. Chapter 8 of the draft Plan includes policy to coordinate and protect the environment on the island of Ireland.

Mitigation Proposed:

- **NPO 23:** Reference should be included stating successor policies relating to national policy for rural areas and the islands should be screened for SEA and AA.
- **NPO 26:** The policy should reference the need for environmental assessment and supporting text should be updated to reflect the nature of environmental value provided by heritage assets.
- **NPO31:** This objective should be revised to acknowledge the current evidence base and the need for the rural economy to proactively address these issues as part of a long term sustainable solution.
- **NPO34:** Support in this policy must be linked to improvements in water quality parameters associated with agriculture and real reductions in GHG emissions associated with agriculture that go beyond offsetting with forestry. *This mitigation has been partially integrated into the final draft NPO in so far as it links to the ensuring progress in achieving targets in the National Climate Action Plan and the River Basin Management Plan. However, this falls short of the full intent of the mitigation.*
- **NPO 35:** Support for the strategies should be conditional on integration of environmental considerations and outcomes of monitoring of existing facilities. *This mitigation has been partially integrated into the final draft NPO however there is no link to monitoring.*
- **NPO 35:** This NPO would benefit with updated wording ensuring alignment with the relevant NBAP. *This mitigation has been integrated into the final draft NPO.*
- **ALL:** As per NPO 1 support for sectoral plans, programmes and strategies should be linked to them being subject on application of SEA / EIA/ FRA / AA as appropriate.
- **ALL:** A new NPO addressing light pollution, especially in areas designated as ‘Dark Sky’ should be considered.

8.3.6 Chapter 6 – People, Homes and Community

NPO	2018 Objective	2024 Objective
37	Support the objectives of public health policy including Healthy Ireland and the National Physical Activity Plan, though integrating such policies, where appropriate and at the applicable scale, with planning policy.	Support the objectives of public health policy including the Healthy Ireland Framework and the National Physical Activity Plan, though integrating such policies, where appropriate and at the applicable scale, with planning policy.
38	Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages	No change
39	Plan for a more diverse and socially inclusive society that targets equality of opportunity and a better quality of life for all citizens, through improved integration and greater accessibility in the delivery of sustainable communities and the provision of associated services.	No change
40	Support the implementation of language plans in Gaeltacht Language Planning Areas, Gaeltacht Service Towns and Irish Language Networks.	No change
41	Local planning, housing, transport/accessibility and leisure policies will be developed with a focus on meeting the needs and opportunities of an ageing population along with the inclusion of specific projections, supported by clear proposals in respect of ageing communities as part of the core strategy of city and county development plans.	Local planning, housing, health facilities and services , transport/ accessibility and leisure policies will be developed with a focus on meeting the needs and opportunities of an ageing population along with the inclusion of specific projections, supported by clear proposals in respect of ageing communities as part of the core strategy of city and county development plans.
42	<p>Prioritise the alignment of targeted and planned population and employment growth with investment in:-</p> <p>A childcare/ECCE planning function, for monitoring, analysis and forecasting of investment needs, including identification of regional priorities;</p> <p>The provision of childcare facilities and new and refurbished schools on well-located sites within or close to existing built-up areas, that meet the diverse needs of local populations;</p> <p>The expansion and consolidation of Higher Education facilities, particularly where this will contribute to wider regional development, and</p> <p>Programmes for life-long learning, especially in areas of higher education and further education and training where skills gaps are identified.</p>	<p>Prioritise the alignment of targeted and planned population and employment growth with investment in:</p> <p>A childcare/ECCE planning function, for monitoring, analysis and forecasting of investment needs, including identification of regional priorities;</p> <p>The provision and timely delivery of childcare facilities and new and refurbished schools on well-located sites within or close to existing built-up areas, including in support of infill and brownfield development, that meet the diverse needs of local populations and act as a key enabler for housing development, thereby contributing to the development of sustainable communities;</p> <p>The expansion and consolidation of Further and Higher Education facilities, particularly where this will contribute to wider regional development, and</p> <p>Programmes for life-long learning, especially in areas of higher education and further education and training where skills gaps are identified.</p>
43	To target the delivery of 550,000 additional households to 2040	To target the delivery of housing to accommodate approximately 50,000 additional households per annum to 2040.
44	Prioritise the provision of new homes at locations that can support sustainable development and at an appropriate scale of provision relative to location	No change

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NPO	2018 Objective	2024 Objective
45	Support the provision of lifetime adaptable homes that can accommodate the changing needs of a household over time.	No change
46	Increase residential density in settlements, through a range of measures including reductions in vacancy, reuse of existing buildings, infill development schemes, area or site-based regeneration and increased building heights.	Increase residential density in settlements, through a range of measures including reductions in vacancy, re-use of existing buildings, infill development schemes, area or site-based regeneration, increased building height and more compact forms of development.
47	New statutory guidelines, supported by wider methodologies and data sources, will be put in place under Section 28 of the Planning and Development Act to improve the evidence base, effectiveness and consistency of the planning process for housing provision at regional, metropolitan and local authority levels. This will be supported by the provision of standardised requirements by regulation for the recording of planning and housing data by the local authorities in order to provide a consistent and robust evidence base for housing policy formulation	Continue to develop methodologies and data sources to improve the evidence base, effectiveness and consistency of the planning process for housing provision at regional, metropolitan and local authority levels. This will include standardised requirements for the recording of planning and housing data by the local authorities in order to provide a consistent and robust evidence base for housing policy formulation
48	A 'Housing Need Demand Assessment' (HNDA) is to be undertaken for each Local Authority Area in order to correlate and accurately align future housing requirements. The HNDA is: to be undertaken by Local Authorities with coordination assistance to be provided by the Regional Assemblies, and at a Metropolitan scale, particularly where inter-county and inter-regional settlement interactions are to be planned for and managed; to primarily inform housing policies, housing strategies and associated land use zoning policies as well as assisting in determining where new policy areas or investment programmes are to be developed; and to be supported, through the establishment of a coordination and monitoring unit to assist Local Authorities and Regional Assemblies in the development of the HNDA (DHPLG, Regional Assemblies and the Local Authorities).	A 'Housing Need Demand Assessments' (HNDAs) undertaken for each Local Authority Area in order to correlate and accurately align future housing requirements: to be undertaken by Local Authorities with coordination assistance to be provided by the Regional Assemblies, and also at a Metropolitan scale, particularly where inter-county and inter-regional settlement interactions are to be planned for and managed; and to primarily inform housing policies, housing strategies and associated land use zoning policies as well as assisting in determining where new policy areas or investment programmes are to be developed.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 37	0	0	0	0	0	0	0	0	0
NPO 41	+	0	0	0	0	0	+	0	0
NPO 42	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 43	+	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-
NPO 46	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 47	+	0	0	0	0	0	+	0	0
NPO 48	+/-	0	0	0	0	0	+/-	0	0

Key: PHH: Population & Human Health; BFF: Biodiversity, Flora & Fauna; LS: Land & Soils/Sediments; W: Water; AQ: Air Quality; CF: Climatic Factors; MA: Material Assets; CH: Cultural Heritage; LandS: Landscape.

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NPO37 has minor amendments related to syntax and clarity. There are not significant effects arising from this amendment.

Minor amendments have been made to **NPO41** to additionally include references to health facilities and services. As such these amendments are broadly positive for PHH and MA as acknowledgement of requirement of health facilities and services along with other amenities and transport services for city and county land use planning is crucial for sustainable communities.

The additional commitment in **NPO42** to timely delivery of childcare facilities and new and refurbished schools will have indirect positive effects for PHH and MA by ensuring that these facilities are available to local populations so they can play their part in achieving a more healthy, sustainable and climate-neutral communities. It is essential that such facilities and services are delivered hand-in-hand with housing provision, particularly where significant increase in population in an area is anticipated on foot of housing provision. A short fall in childcare or school places can have significant negative effects for AQ, CF where private car journeys are needed to bring children out of their local area to reach the services. The need for transport outside a local area, necessitating long commutes is also negative for PHH as sustainable communities cannot develop and thrive without these critical foundations. Recognition should be made within the policy that childcare and school delivery associated with increased housing developments should also explicitly support children and young adults with special educational needs to ensure there is capacity within communities for all residents to access education locally. The addition of reference to *Further and Higher Education* will have indirect positive effects for PHH and MA in the short to long term as it recognises a wider range of post primary and post-secondary educational which supports inclusivity. In all cases appropriate public transport links and active travel links are essential to avoid. These links must be proactively planned for integrated housing and educational provisions. If not delivered in advance or as a minimum in tandem, this will force students and staff to rely on private car to access facilities with negative impacts on AQ and CF in particular but also on MA, BFF, W, LS, LandS and CH where more and more car parking is required to accommodate travelling staff and students with potential for emissions to air, soil and water and changes to landscape character. As noted in Chapter 2, 3 and 4 support for infill and brownfield development will have mixed effects. Direct and indirect positive effects are anticipated for PHH, MA, LS, W CH, and LandS from regeneration and optimising of brownfield sites. Environmental sensitivities vary from site to site and robust constraints and site selection is required to inform development on a site by site basis if negative effects on the receiving environment are to be avoided. Flood risk and traffic management in particular have potential for significant negative effects for existing communities as a result of these infill developments. These aspects can in turn indirectly impact all other receptors negatively as a result of emissions to air and water and deterioration in environmental quality. Issues of built and natural heritage can also lead to significant effects as a result of developing on infill sites through loss and deterioration of habitat and features. Development of brownfield sites, urban densification, increased emissions to air and water as well as increased demand on municipal services means there is potential to negatively impact on PHH, BFF, LS, W, AQ, MA and LandS. Sites which have historical industrial usage and may have contaminated ground/soil or legacy waste issues and as such have the potential to generate hazardous wastes/contaminated soils when they are regenerated. However, the positive impacts of this can include remediation and reuse of the site. Notwithstanding the potential for negative effects, proactive land management can support protection and conservation of biodiversity and the conservation of wild areas that act as sources/ sinks for native flora and fauna and support nature restoration e.g. reverse infilled wetlands and restore them as habitat for biodiversity, where possible. This is particularly important in the context of nature restoration.

NPO43 has been amended to increase the delivery of housing to accommodate approximately 50,000 additional households per annum to 2040 which is an increase on the 2018 target of 550,000 additional households to 2040. This reflects the recognition of the capacity required to address not only historic issues of insufficient housing but also the population growth projections. The supporting text has also been updated to reflect Housing for All, the Governments Housing Plan for Ireland which includes the stated aim that “Everyone in the State should have access to a home to purchase or rent at an affordable price, built to a high standard and in the right place, offering a high quality of life”. The amended text reflects the policy of tackling housing via four pathways which include: supporting home ownership and increasing affordability; eradicating homelessness, increasing social housing delivery and supporting social inclusion; increasing new housing supply; and addressing vacancy and efficient use of existing stock. It is noted that the NPO and supporting text in the section refer to “50,000 new homes” and also to “housing to accommodate approximately 50,000 additional households”. It is not clear if there is intended to be a distinction or if the two terms are being used interchangeably however it would be beneficial for the draft Plan to pick one term where targets are being quoted to avoid misunderstandings and allow proper monitoring of progress.

The future provision of an adequate, affordable supply and diversity of housing options to accommodate additional households should give rise to positive effects for PHH and MA. Notwithstanding that, the potential for negative effects on all receptors from delivery of this level of housing is significant as laid out in Chapter 2 in relation to population growth projections. The projected increase in housing to accommodate 50,000 households per annum has the potential to negatively impact on PHH as a result of insufficient capacities in water, wastewater and utilities if they cannot keep pace. The target has potential for impacts to BFF as a result of deterioration in environmental quality e.g., water quality from construction activities and as a result of insufficient capacity in services such as wastewater – mentioned above. The level of development is also likely to result in the gradual erosion of habitats, disturbance and loss of species and interruption of migration routes as a result of development and recreational pressures. This is particularly important in the context of the policy of compact growth where small pockets of open area, mature trees and linear networks are being

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eroded in built up areas for residential development and transport corridors leading to a loss of stepping stones and networks to support the movement and distribution of flora and fauna. Light pollution and light spillage can also impact negatively on BFF. Areas which have a function support role for resting, feeding, nesting are also under pressure from compact growth policies. The ongoing sealing of soil has potential for negative effects on LS and on W and MA where it exacerbates flood risk. Water quality (surface and groundwaters) has also the potential to be negatively impacted as a result of construction activities such as releasing suspended solids, chemical pollution etc. and operational impacts to water quality from inadequate drainage and insufficient treatment of wastes. There is likely to be increased dependence in the transport and heating sectors on fossil fuels in the short term until sufficient capacity is available in renewables. Continued reliance on fossil fuels for heating and transport will result in deterioration of air quality from generation of particulate matter (PM10 and PM2.5) and release of polluting substances such as NO_x and SO_x resulting in direct impacts on AQ and indirect impact for PHH and BFF where species may be sensitive to nitrogen pollution. Ongoing construction also has the potential to negatively impact AQ and PHH from release of dust and potentially other polluting emissions. The delivery of increased housing will result in direct and indirect increases in GHG with negative effects on CF through building materials, transportation and construction as well as GHG emissions from heating and other sources related to housing. Ireland is already missing key climate targets and the EPA note that per capita emissions need to reduce significantly. Loss of carbon sinks for development land and emissions of greenhouse gases from construction and operational activities (building material, transport, processes) are potential impact pathways. The necessary scale of development needed has potential to impact on greenfield lands for delivery of additional homes, notwithstanding the focus on compact growth. Furthermore, the increased households will generate wastes and increase the need for capacity in services to accommodate the growth sustainably e.g., broadband, energy, waste, housing, water and wastewater, education and healthcare. Development, even compact development has potential to impact on LandS by changing character of an area or interrupting important views. This is dependent on the location, nature and scale of development. Similarly, the necessary development has the potential to impact on CH due to loss and disturbance of known and unknown archaeology and built heritage and the impact on the landscape character and curtilage of built heritage features as a result of wider development and introduction of light spill from artificial lighting.

In **NPO46**, reference has been added to “more compact forms of development”. Supporting text has been included to reference the Sustainable Residential Development and Compact Settlements Guidelines issued as Ministerial Guidelines in January 2024. These guidelines, which were subject to the SEA and AA processes, demonstrate how higher densities and more compact and sustainable settlement patterns can be achieved. Based on the Guidelines, more compact forms of development point to more intensive use of existing buildings and properties, re-use of existing vacant buildings, more intensive use of previously developed land and infill sites and increased scale of new buildings. The more compact forms of development referenced in NPO 46 will facilitate more housing and more efficient use of available space in a neighbourhood approach based on the concept of the functional neighbourhoods with a range of local services and amenities and access to public transport all within a short walk or cycle of homes. This will have direct positive impacts for PHH, AQ, CF and MA. It will also have indirect positive impacts for W, LS, BFF, CH and LandS by controlling urban and housing sprawl into valuable agricultural and natural heritage areas, reducing the loss of hedgerows and other strong linear landscape and biodiversity features. Negative effects may occur where the scale of new buildings impacts landscape character and impinges on views of existing receptors. This may also result in indirect negative effects for CH if it impacts on the setting of important cultural heritage features. Sympathetic design and proportionality are key considerations to avoid significant negative effects. More compact settlements will also result in increased pressure on services with indirect negative effects for W and MA where wastewater or water treatment is not sufficient to cater for the higher densities. Similarly indirect negative impacts may occur for AQ and CF where public and active transport options are not delivered in tandem or in advance of the increased densities and on PHH where education and health services and open/recreational spaces are not available for all. A further significant negative impact is recreational pressure from the higher densities sought. Without careful consideration of the sensitivity of receptors in the vicinity of such compact growth areas, increased disturbance of local and / or protected biodiversity, cultural heritage and landscape features may likely occur.

The Sustainable Residential Development and Compact Settlements Guidelines set out development standards for housing in relation to minimum size, separation distance, provision of open space and parking to mitigate many of the negative effects based on the assumption that modern methods of design and construction can accommodate reduced allocation of space. However, the application of such modern methods of design and construction are not uniformly applied resulting in living arrangements which are often unsustainable for long term living and do not address the reality of changing needs of individuals and families over medium to long term. While it is acknowledged that NPO 45 refers to provision of lifetime adaptable homes that can accommodate the changing needs of a household over time, it does not extend to consideration of the supporting amenity beyond the homes themselves, especially given many new homes will be multi-unit developments. For example, the inclusion of a playground may go some way to addressing children in these more compact developments, however there is a distinct lack of thought for infrastructure for teens and young adults. This must involve inclusive spaces which could include, for example, space for ball games, ball/wall meeting areas, social play equipment and small sheltered and safe meeting areas with free access to Wi-Fi. Older residents also require thought for their needs which will be very different to younger people and active families. While design of houses and apartments does consider older residents there would appear to be limited consideration of recreational and social infrastructure for aging populations. To avoid compact living remaining a short term solution for people, the life cycle needs of all life-stages of residents need to be incorporated into design principles more tangibly.

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Assessment and Discussion:

NPO47 has been updated to reflect that, since 2018, enhanced methodologies and statutory guidelines have been put in place to assist in planning of future housing requirements effectively, taking into consideration the varying housing needs that are required to be met, including the housing needs of older people, people with disabilities, the travelling community, social and affordable housing, families of varying sizes and income levels and students. It also includes preparation by local authorities of Housing Delivery Action Plans since 2022 to assist in identification of the quantum of homes required to be constructed and the land available for such construction. These methodologies, guidelines and data all contribute to a more robust decision making framework for future housing need which is positive for PHH and MA.

NPO 48 relates to Housing Need Demand Assessments (HNDAs) developed by each Local Authority. These will be updated to align with updated data sources, in order to support the preparation of housing strategies and all related housing policy outputs. The key modification in **NPO 48** is the deletion of bullet point 3 which relates to the establishment of a coordination and monitoring unit to assist Local Authorities and Regional Assemblies in the development of the HNDA. A centralised spatial database, which allows local authorities to run a number of different scenarios to inform key decisions on housing need and supply has now been established and is supported by a coordination and monitoring unit within DHLGH. As such this bullet point has been achieved and has been deleted from the revised NPF. While the deletion is not significant, the lack of a follow on action is considered a missed opportunity in the revised NPF. Despite the work done to date on HDNA, there remains a significant gap between need and availability across housing types throughout in key locations, including those where population is targeted. Homelessness figures are tracked by Government on a monthly basis by way of monitoring access to emergency accommodation. Figures are provided on a monthly basis and for December 2023 these indicate that 13,318 people (including 3,962 children) accessed emergency accommodation. This figure does not include persons sleeping rough, in direct provision, homeless but in hospital or prison, in refuges or being temporarily assisted by friends or family, and as such the figure may be far greater than reported. Seasonal pressures may also affect housing stock availability further. Notwithstanding the achievement of the objective which will have indirect positive effects for PHH and MA, it is recommended that NPO 48 is revised to include further aims to specifically address the speed of response once housing need has been established if long term negative effects are to be avoided.

Mitigation Proposed:

- **ALL:** Housing developments of scale seeking planning permission should demonstrate evidence of existing adequate capacity or committed capacity for the cumulative anticipated population of the area in the following key services prior to delivery of the housing: drinking water, wastewater, early years, primary and secondary school places, health care and elderly care services.
- **ALL:** Housing developments of scale seeking planning permission should consider the impact of recreational pressure from the new population (and cumulatively with existing populations using the areas) on local biodiversity and protected habitats and species. Furthermore a Recreational Access Management Plan shall be prepared to identify necessary mitigation strategies where significant pressures are identified.
- **NPO42:** Recognition should be made within NPO 42 that childcare and school delivery associated with increased housing developments should also explicitly support children and young adults with special educational needs to ensure there is capacity within communities for all residents to access education locally.
- **NPO 43:** Terminology in relation to the number of homes required should be reviewed and standardised for clarity of the plan [50,000 houses or houses to accommodate 50,000 households].
- **NPO 43:** See also mitigations from Chapter 2.
- **NPO46:** To avoid compact living remaining a short term solution for people, the life cycle needs of all life-stages of residents need to be incorporated into design principles more tangibly particularly those related to amenity provision for teenagers, young adults and older residents. A study into the recreational and social needs of residents in compact forms of development should be coordinated by the DHLGH and lessons learned from recent compact developments of scale nationally (and international examples where relevant) to inform a future guidance note or similar for LA and developers on designing for all life stages.
- **NPO48:** Revised NPO to include further aims to specifically address the speed of response once housing need has been established if long term negative effects are to be avoided.

8.3.7 Chapter 7 – Realising our Island and Marine Potential

NPO	2018 Objective	2024 Objective
49	Regional, metropolitan and local development plans will take account of and integrate relevant maritime spatial planning issues.	No change
50	Support the sustainable growth and development of the maritime economy and continue to invest in the seafood sector and our Fishery Harbour Centres, particularly in remote rural coastal communities and islands.	No change
51	Ensure that the strategic development requirements of Tier 1 and Tier 2 Ports, ports of regional significance and smaller harbours are addressed as part of Regional Spatial and Economic Strategies, metropolitan area and city/county development plans, to ensure the effective growth and sustainable development of the city regions and regional and rural areas	Ensure that the strategic development requirements of Tier 1 and Tier 2 Ports, ports of regional significance, State Fishing Harbours and smaller harbours are addressed as part of Regional Spatial and Economic Strategies, metropolitan area and city/county development plans and plans at local level to ensure the effective growth and sustainable development of the city regions and regional and rural areas, including, where appropriate, infrastructure to effectively support the development and maintenance of off-shore renewable electricity generating developments.
52	N/A	NEW: Support the sustainable delivery of port and harbour infrastructure to facilitate the development, maintenance and operation of off-shore renewable electricity generating developments.
53	Ensure that Ireland's coastal resource is managed to sustain its physical character and environmental quality.	No change
54	In line with the collective aims of national policy regarding climate adaptation, to address the effects of sea level changes and coastal flooding and erosion and to support the implementation of adaptation responses in vulnerable areas.	No change
55	N/A	NEW: Support the development of coastal management plans to address the likely effects of sea level changes and coastal flooding and erosion and to support the implementation of adaptation responses in vulnerable areas.
56	To support, within the context of the Offshore Renewable Energy Development Plan (ORED) and its successors, the progressive development of Ireland's offshore renewable energy potential, including domestic and international grid connectivity enhancements	To support, within the context of the Offshore Renewable Energy Development Plan (ORED) and its successors , the progressive development of Ireland's offshore renewable energy potential, the sustainable development of enabling onshore infrastructure including domestic and international grid connectivity enhancements, non-grid transmission infrastructure , as well as port infrastructure for the marshalling and assembly of wind turbine components and for the operation and maintenance of offshore renewable energy projects.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 51	+/-	+/-	+/-	0/-	+/-	+/-	+/-	0/-	+/-
NPO 52	+/-	+/-	+/-	0/-	+/-	+/-	+/-	0/-	+/-
NPO 55	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-
NPO 56	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-	+/-

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Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

Assessment and Discussion:

This policy area provides details on the growing maritime economy and the planning processes needed to effectively drive development and management. The key revisions relate to use of additional tools to plan in the area of coastal management and also to plan for port and other ancillary infrastructure to support the roll out of off-shore renewable energy developments. This signals alignment with both the National Marine Planning Framework (NMPF) and also the Climate Action Plan (CAP).

Irish ports are a key facilitator of economic development. They support regional, national and international movement of people and goods. Their strategic development is supported by National Ports Policy which is currently under review and subject to both SEA and AA processes. These ports represent strategic infrastructure not only for the local economies but also for wider regional hinterlands. The importance therefore of alignment with terrestrial planning to ensure their sustainable development to support in particular ORE development is key and will need to be reflected through the RSES and the local authorities which are within the hinterland of these ports.

Much of the policy base for this element of the draft Plan has potential for transboundary effects with Northern Ireland, particularly in relation to activities (fisheries, aquaculture, offshore energy for example) in the vicinity with border counties or where shared resources exist. Chapter 8 of the draft Plan includes policy to coordinate and protect the environment on the island of Ireland.

NPO51 includes a new specific reference to State Fishing Harbours, of which there are presently six: Howth, Co. Dublin, Dunmore East, Co. Waterford, Castletownbere, Co. Cork, Ros an Mhíl, Co. Galway, An Daingean (Dingle), Co. Kerry and Killybegs, Co. Donegal. These harbours, as with the ports have a socio-economic significance for their regional and rural associated areas. This will have indirect positive effects for PHH and MA by recognising the role for these harbours in wider land use planning.

The additional amendments to **NPO51** are virtually the same amendments as the newly introduced **NPO52** and the need for the two very similar entries is not clear. The text in both indirectly acknowledges the need for the alignment of terrestrial and marine planning in order to ensure sustainable development of the ports can take place and a specific objective in that regard would be more beneficial than the similar texts currently in the plan. The implied alignment of terrestrial and marine planning will have indirect positive effects for PHH and MA, recognising both the importance of ports to regional economies and the essential role they play they can play in delivery of ORE. There will be indirect positive impacts in the short to long term for PHH and MA associated with growth and development of the city regions and regional and rural areas associated with increased employment opportunities, increased requirement for local services including lodging, food and beverage. There are also opportunities for co-location of complimentary facilities and services especially where connectivity and logistics are improved. There is also potential for direct positive impacts on LS where contaminated land often associated with ports is remediated and control measures introduced to mitigate point and diffuse sources of pollution to soil and water.

The reference to supporting the development and maintenance of off-shore renewable electricity generating developments is notable as this forward planning will be essential for the roll out of climate ambition associated with offshore ORE - Government targets are to achieve installed offshore wind capacities of 5 GW by 2030, 20 GW by 2040 and 37 GW by 2050. The policy has potential for indirect positive impact in terms of CF and indirect positive impacts for PHH, AQ and MA associated with meeting climate targets and contributing to achievement of the national climate objective. There are also indirect positive effects for BFF which is a receptor whose status is closely linked to climate change. Migration routes, territories and species ranges are all likely to be impacted negatively by unmitigated climate change. These objectives will also have indirect positive effects for MA and CF as they contribute to the transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050. There are also direct benefits to PHH and MA from supporting supply chain logistics trade and local employment through all lifecycle stages of ORE development.

Notwithstanding these benefits, ports and harbours do have potential for negative effects, particularly where they may need to expand or enhance current offerings in order to provide commercial support for developments. These negative effects include potential for increased noise and disturbance associated with intensification of activities or introduction of noisier activities impacting negatively on PHH, MA and BFF that may be in the area. It is important to note that much of the coastline around harbours and ports around Ireland are designated as European sites and include bird and mammal species that could be disturbed by certain types of noise. Species and habitat disturbance from increased human and transport activity, emissions to air, soil or water leading to deterioration in quality, increased collision risk to marine mammals and / or sea birds from boats all have potential to negatively impact on both protected (qualifying interests and special conservation interests associated with European designations) and local BFF. Emissions would also impact negatively on PHH. Water quality (W) may also be impacted negatively through release of fuel and other waste product pollutants and by disturbance of contaminated sediments which often occur near ports and harbours. Increased marine litter is also a potential effect as activity increases. Collision risk to birds and mammals, recreational users and commercial users may also increase with intensification of activity. Shipping movements required to service construction and operation & maintenance stages of ORE developments also have potential to contribute to deterioration in air quality (AQ) (in particular SO₂ and particulates).

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Assessment and Discussion:

Port facilities in particular can be highly modified coastal areas and may have legacy and contemporary uses e.g., heavy industry. Modifications for growth / expansion have potential for negative impacts to LS and W where contaminated land is disturbed and where pollutants/contaminated material is remobilised to the water column and soils/sediments. Similarly, dredging and dumping at sea may be required in order to maintain shipping lanes or increase water depths for the ORE sector with potential negative implications for BFF, W as well as CH (through disturbance to known or unknown marine heritage features). As port areas already represent highly modified coastal features, the impacts to LandS are considered to be broadly neutral however negative impacts can arise where adjacent landscape and/or seascape character is affected by port expansion / alterations that might be needed to support supply chain logistics for wind turbines and the turbine arrays themselves.

The reference to sustainable development is welcomed however it lacks any specific commitment to ensure robust assessment of suitability. The NPOs would benefit from a qualification of support being subject to the application of statutory environmental assessments at plan and project level and the outcome of development permission and / or licensing processes. This would ensure broadly positive effects for all SEOs, particularly for BFF, W, LS CH and LandS as potential impacts can be described, assessed and if required mitigated in line with the mitigation hierarchy to ensure sustainable development which takes account of impact pathways and importantly the potential for cumulative effects. Early environmental considerations related to ports and harbours can help avoid any potential conflicts or competition for space. Application of mitigation from the SEA and AA processes ongoing on the National Ports policy will assist with top down cascading protections which will ensure sustainable projects are brought forward for planning.

Supply chain logistics are a significant risk in terms of achieving climate ambitions for 2030 and beyond therefore delays in suitable port infrastructure could have short to long term negative effects for CF and indirectly BFF and PHH.

NPO55 is new NPO which addresses the issue of challenges of climate change for coastal communities in terms of coastal erosion and sea-level rise resulting in increased frequency of coastal flooding and erosion which again infers alignment of terrestrial and marine planning however it is not clear who is responsible for their preparation and if they are voluntary or not. The coast is a critical zone in terms of planning as it provides many ecosystem services on which coastal communities depend including but not limited to recreational opportunities, food provisioning, cultural connections, flood mitigation, water quality among others. Furthermore, it is an area with significant natural heritage potential e.g., bird nesting, and in an Irish context includes a considerable number of European sites designated for habitats and species of community importance (see NIS). It is also likely that more sites will be designated in the coming years as Ireland's complies with obligations for biodiversity protection and restoration being driven at EU level. Coastal Management Plans can offer the opportunity to holistically address the combined pressures of sea level changes and coastal flooding and erosion for the benefit of coastal communities and the wider receiving environment with positive effects for all environmental receptors. However, the scope of the plans appears to be limited and does not address either the impact of the infrastructure required to address coastal erosion and sea-level rise on LandS, BFF, CH, W, MA and PHH as all these receptors interact with the coastal area either as natural and built heritage or through employment, economy, recreation or as communities. It also does not address the potential for cumulative pressures from coastal developments including housing, recreational pressures from increasing populations, water quality deterioration from poor wastewater treatment, shipping, ORE sector, aquaculture and fisheries sector etc. A wider integrated coastal zone management approach would deliver wider benefits and allow for proper alignment of the terrestrial and marine planning systems, planning for ecosystems and ecosystem services while also addressing the issues of coastal erosion and sea-level rise. Integrated coastal zone management (ICZM) is one tool which has been used not only to facilitate the interface between terrestrial and marine issues but also to ensure there is a framework for discussion and consensus associated with the terrestrial and marine interactions. A national scale policy for such a wider scope coastal management plans would be positive especially supported by a clear guidance framework on responsible bodies and how these should be developed.

Support for the progressive development of Ireland's offshore renewable energy potential in **NPO56** will have positive impacts for all environmental receptors as it will aid Ireland in meeting national and international commitments on climate and green energy production. The Government has adopted a plan led approach to achieve the set offshore wind targets for 2030 and 2050, through development of ORE Designated Maritime Area Plans (DMAP). These plans will seek to identify areas which are suitable for various ORE technologies and will consider the interface with the onshore grid capacity. The DMAP will be subject to sub-regional SEA and AA as part of the plan process.

Revised **NPO56** will give rise to both positive and negative impacts. It is broadly positive in the context of acknowledging and planning for the infrastructure required to deliver on ORE targets over the coming decade. Suitable port and grid infrastructure is critical to realising the offshore renewable energy potential – much of which will be likely to be wind turbines in the short to medium term. NPO56 recognises these supporting elements.

There will be positive impacts for PHH and MA associated with access to employment opportunities both directly within the ORE and support sectors and also indirectly in service sectors such as hotels and food/ beverage, shops etc. Access to employment and commercial opportunities, particularly for rural and coastal communities in the hinterland of the ports will be positive in the short to long term but most pronounced during the construction phases of these developments.

There is, in parallel the potential for negative effects on other sectors where construction and operation of offshore windfarms impacts negatively through increased disturbance, deterioration in environmental quality and visual intrusion

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Assessment and Discussion:

in particular. As port areas already represent highly modified coastal features, the impacts to LandS are considered to be broadly neutral however permanent negative impacts for LandS can arise where adjacent landscape and/or seascape character is affected by port expansion / alterations that might be needed to support supply chain logistics for wind turbines. Conflicts with other users of the sea where offshore and near-coastal infrastructure may interfere with coastal activities, both recreational and commercial e.g. where the physical presence of infrastructure acts as a barrier to movement, or the exclusion of certain fishing activities from areas with subsea cables may also have negative impacts on MA and PHH.

NPO56 will contribute to achieving the national climate objective and the ambitions in CAP 23/24 with positive impacts for CF. Indirect positive impacts in the medium to long term for AQ and PHH are also anticipated as the State switches to cleaner energy sources. It is noted in the short term that construction activities will have temporary negative effects on CF, AQ and PHH. These will be associated with manufacture of components, increased emissions from vessels used transport of materials and personnel, and actual construction of port extensions, offshore arrays and supporting offshore and onshore grid infrastructure. Also, operational phase for offshore wind projects can likely result in negative impacts on PHH, AQ and CF as well due to increased emissions from vessels used for maintenance works and increased occasional risk to health and safety. However, such impacts would be dealt with at the project stage more appropriately.

Direct and indirect negative effects are also anticipated for BFF as a result of NPO 56. As noted above, many of Ireland's ports share space with European and national conservation designations including SAC and SPA. There is potential for conflict with qualifying interests and special conservation interests and achievement of conservation objectives assigned to these sites. Ports tend to be heavily industrial areas with historic contamination and disturbance from noise and human activity can impact negatively on birds and marine mammals in particular depending on factors such as species, seasonal sensitivities etc. Port areas can also contain significant contamination which can be mobilized during construction activities with indirect negative impacts for BFF through deterioration of W and LS quality. Where expansion of ports is required to support offshore wind, there is also potential for landuse change and disturbance or loss of important supporting habitat for birds and other fauna e.g., resting or feeding areas. Dublin Bay Biosphere Partnership published a Biodiversity Conservation and Research Strategy for 2022-2026¹²⁰ that has proposed 74 conservation and research related actions. Out of which 39 relate to conservation management actions for the site-specific QIs/SCIs of the designated sites that form a part of the Biosphere Reserve including birds and mammals. These actions would likely tackle the main issues affecting the key designated sites with the help of management plans and conservation activities. A similar approach can be utilised for ports that hold connectivity with EU sites to avoid any significant impacts particularly for BFF and W as a result of implementation of NPO56.

Introduction of new activities and intensification of activity at already industrialised port areas may compromise compliance with WFD and MSFD compliance with negative direct and indirect impacts for W.

Where expansion /dredging may be need for ports to facilitate wind farm developments this has potential for direct and indirect negative impacts for CH. There is significant marine CH in the form of wrecks and submerged landscape around the Irish coastline which could be impacted as a result of port activity and offshore wind.

Indirectly, offshore infrastructure facilitated through the ports can also have negative impacts. For BFF alteration/removal of benthic substrate, traversing sensitive habitats, changing species composition/food webs or by acting as potential corridors for the spread of invasive species all have the potential for negative effects on BFF. There may be negative impacts to LS and W where seafloor is permanently removed or cleared as part of site preparation activities leading to temporary or permanent effects. Certain seafloor sediments on the other hand may be afforded protection by offshore infrastructure which can have a stabilising influence. W may be impacted by increased siltation depending on the type of ORE or by remobilisation/disturbance to contaminants previously locked up in sediments. LandS may be negatively impacted through impacts to landscape character or setting, which is also dependant on the siting of infrastructure (e.g. sightlines to wind turbines) and terrestrial connections such as substations.

Mitigation Proposed:

- **NEW NPO:** A new NPO should be included to specifically support the alignment of terrestrial planning with marine planning at regional and local level to provide for the sustainable development of port infrastructure that enables the development of ORE.
- **ALL:** Supporting text on Ports and Harbours should include an explicit reference to the Guidance document on the implementation of the Birds and Habitats Directive in estuaries and coastal zones with particular attention to port development and dredging, European Commission (2011).

¹²⁰ Dublin Bay Biosphere Partnership (2022) Dublin Bay Biosphere Biodiversity Conservation and Research Strategy 2022-2026. Dublin Bay Biosphere Partnership, Dublin. Available at: https://www.dublincity.ie/sites/default/files/2023-06/Dublin%20Bay%20Biosphere%20%27Biodiversity%20Conservation%20%26%20Research%20Strategy%202022-2026%27%20Report_final.pdf

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Assessment and Discussion:

- **NPO51 and 52:** These NPOs would benefit from a qualification of support being subject to the application of statutory environmental assessments at plan and project level and the outcome of development permission and / or licensing processes.
 - **ALL:** The DHLGH and DECC should establish a 'Collaborative Forum' to discuss proposed ORE projects and the enabling infrastructure required to support delivery, notably ports and grid (onshore and offshore elements). The collaborative forum should identify the ports which are suitable for ORE and determine the level of intervention needed to upgrade them in the short to medium term to establish feasibility.
 - **ALL:** Masterplans or similar strategies/plans should be prepared for key enabler ports. These Masterplans could guide the planning and development of projects/proposals for expansion of existing port infrastructure, including those which may be within or adjacent to European sites. Examples such as the Dublin Bay Biosphere Biodiversity Conservation and Research Strategy 2022-2026 could be referenced.
 - **NPO55:** This policy would benefit with inclusion of better integration of the coastal and marine interface, potentially through Integrated Coastal Zone Management (ICZM), particularly in the context of ORE which has a significant inter-related onshore footprint.
 - **NPO55:** A national scale policy for coastal management plans should be supported by a clear guidance framework on responsible bodies and how these should be developed.
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8.3.8 Chapter 8 – Working with our Neighbours

NPO	2018 Objective	2024 Objective
57	Work with the relevant Departments in Northern Ireland for mutual advantage in areas such as spatial planning, economic development and promotion, co-ordination of social and physical infrastructure provision and environmental protection and management	Work with the relevant Departments in Northern Ireland for mutual advantage in areas such as spatial planning, development and promotion of the all-island economy, co-ordination of social and physical infrastructure provision and environmental protection and management.
58	In co-operation with relevant Departments in Northern Ireland, to further support and develop the economic potential of the Dublin-Belfast Corridor and in particular the core Drogheda-Dundalk-Newry network and to promote and enhance its international visibility.	In co-operation with relevant Departments and Local Authorities in Northern Ireland, to further support and develop the economic potential of the Dublin-Belfast Corridor and in particular the core Drogheda-Dundalk-Newry network and to promote and enhance its international visibility.
59	In co-operation with relevant Departments in Northern Ireland, support and promote the development of the North West City Region as interlinked areas of strategic importance in the North-West of Ireland, through collaborative structures and a joined-up approach to spatial planning.	In co-operation with relevant Departments and Local Authorities in Northern Ireland, support and promote the development of the North West City Region as interlinked areas of strategic importance in the North-West of Ireland, through collaborative structures and a joined-up approach to spatial planning.
60	N/A	NEW: Support cross border cooperation and funding for health and education services and facilities.
61	In co-operation with relevant Departments in Northern Ireland, enhanced transport connectivity between Ireland and Northern Ireland, to include cross-border road and rail, cycling and walking routes, as well as blueways, greenways and peatways	In co-operation with relevant Departments in Northern Ireland, enhanced sustainable transport connectivity between Ireland and Northern Ireland, to include cross-border road and rail, electric vehicle infrastructure, cycling and walking routes, as well as blueways, greenways and peatways.
62	In co-operation with relevant Departments in Northern Ireland, strengthen all-island energy infrastructure and interconnection capacity, including distribution and transmission networks to enhance security of electricity supply	In co-operation with relevant Departments in Northern Ireland, strengthen all-island energy infrastructure and interconnection capacity, including distribution and transmission networks to enhance security of electricity supply and explore the potential for strategic cooperation on offshore wind energy development.
63	In co-operation with relevant Departments in Northern Ireland, develop a stable, innovative and secure digital communications and services infrastructure on an all-island basis.	No change
64	Support the coordination and promotion of all-island tourism initiatives through continued co-operation between the relevant tourism agencies and Tourism Ireland.	Support the coordination and promotion of all-island tourism initiatives through continued cooperation between the relevant tourism agencies and Tourism Ireland, pursue the further development of sport, and invest in the diverse heritage, arts and cultural and linguistic traditions of the island.
65	In co-operation with relevant Departments in Northern Ireland, ensuring effective management of shared landscapes, heritage, water catchments, habitats, species and trans-boundary issues in relation to environmental policy.	No change
66	In co-operation with the United Kingdom Government and devolved Governments of Northern Ireland, Scotland and Wales, Ireland will support mutually beneficial policy development and	No change

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activity in the areas of spatial and infrastructure planning and other related spheres.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 57	0	0	0	0	0	0	0	0	0
NPO 58	0	0	0	0	0	0	0	0	0
NPO 59	0	0	0	0	0	0	0	0	0
NPO 60	+	0	0	0	0	0	0	0	0
NPO 61	+/-	+/-	+/-	+/-	+	+	+	+/0	+/0
NPO 62	+/-	+/-	0/-	0/-	+/-	+/-	+/-	0/-	0/-
NPO 64	+/-	0/-	0/-	0/-	0/-	0/-	+/-	+/-	0/-

Assessment and Discussion:

The policy based for *Chapter 8 Working with our Neighbours* remains broadly positive in terms of cooperation and consultation. However, a number of issues are noted for the next cycle of the NPF in relation to preventing transboundary effects which should be addressed.

Offshore renewable energy is a critical component of Ireland's climate strategy which has potential for indirect negative transboundary impacts in Northern Ireland in particular (BFF, LandS and W), but also other jurisdictions in the UK and some European mainland countries depending on location and distance from shore.

The wording for **NPO 57** has been amended slightly to remove 'economic' and refer to 'all island economy'. No significant effects are anticipated from this amendment.

The wording for **NPO 58** and **NPO 59** have been amended to include a reference to 'Local Authorities'. This amendment is broadly positive and emphasises on the role of Local Authorities in relation to cooperation with Northern Ireland. No significant effects are anticipated from this amendment.

NPO 60 is a new objective and is broadly positive as it aims at supporting cross border cooperation and funding for health and education services and facilities. There is potential for direct positive impacts on PHH through improved public services such as health and education as this would directly benefit the citizens on both sides of the border.

NPO 61 has minor wording amendments to include *sustainable* transport connectivity which is broadly indirectly positive across SEOs. Further inclusion of '*electric vehicle infrastructure*', will likely result in contribution towards the actions proposed in the Climate Action Plan (CAP24). The current EV infrastructure network in Ireland needs improvements and further roll-out, in order to meet demands for an increasingly electrified transport fleet, and also to ease public concerns around access to reliable infrastructure, which can help incentivise EV uptake. Delivery of EV infrastructure is considered to be indirectly and broadly positive, particularly for PHH, AQ, CF and MA over long term as the measures support a greater number and accessibility to charging infrastructure. However, localized short term negative effects are likely to occur for PHH, BFF, LS and W during the installation of the infrastructure.

NPO 62 has been amended to include reference to strategic cooperation on offshore wind energy development. This amendment is considered indirectly positive for PHH, BFF, CF, AQ and MA in the context of optimising the shift needed to a carbon neutral society overall in the short to long term. However, as with the assessment of ORE in Chapter 7 of the NPF, there is potential for negative effects in the short to long term for all receptors from the construction and operation of offshore wind. This includes loss or interrupting of access, increased traffic and emission of pollutants to air, soil and water (PHH), habitat loss, disturbance, collision and mortality for marine mammals and birds (BFF), release of chemical pollutants and changes to marine processes (W) disturbance of seabed (LS); disturbance of underwater archaeology (CH), interruption and loss of views (LandS). These elements will be considered as part of a project level EIAR, noting that depending on location, developments in RoI or NI may impact on the adjacent jurisdiction. Ongoing consultation and coordination will be needed throughout the planning tiers.

NPO 64 has been amended to additionally relate to further development of sport, and provision of investments for promotion of heritage, arts and cultural and linguistic traditions of the island. This is directly positive for PHH, CH and MA as it will likely result in improvements in places and features of heritage importance shared in the border regions, thereby increasing tourism opportunities. The types of development are not specified and it is not clear if it relates to infrastructure. However, as with any infrastructural development, there is a potential for negative effect on all receptors during construction phase related to increased dust, noise, travel disruptions; disturbance, loss or fragmentation of habitats; loss of soil resource/soil sealing or hydrogeological effects; pollutant or construction debris run-off; alterations to heritage features/setting or landscape and views from new infrastructural elements unless proper siting and environmental studies as relevant are incorporated into the strategic planning of such facilities.

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Assessment and Discussion:

Mitigation Proposed:

- **NPO 62:** Ongoing consultation and coordination throughout the planning tiers as relevant should be stipulated.
- **NPO 64:** Robust site selection is required for any facilities to be developed.

8.3.9 Chapter 9 – Climate Transition and our Environment

NPO	2018 Objective	2024 Objective
67	The planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the requirements of all relevant environmental legislation and the sustainable management of our natural capital.	The planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits, having regard to the medium and longer-term requirements of all relevant environmental and climate legislation and the sustainable management of our natural capital.
68	Support the circular and bio economy including in particular through greater efficiency in land management, greater use of renewable resources and by reducing the rate of land use change from urban sprawl and new development	Support the circular and bio economy including in particular through greater efficiency in land and materials management, promoting the sustainable re-use of existing buildings and structures while conserving cultural and natural heritage , the greater use of renewable resources and by reducing the rate of land use change from urban sprawl and new development.
69	N/A	NEW: Support the growth and development of efficient district heating, electrification of heating, and utilisation of geothermal energy.
70	Reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions	Reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions as expressed in the most recently adopted carbon budgets .
71	Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.	Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a zero carbon economy by 2050.
72	N/A	NEW: Support the development and upgrading of the national electricity grid infrastructure, including to support the delivery of renewable electricity generating development.
73	N/A	NEW: Support an all-island approach to the delivery of renewable electricity through interconnection of the transmission grid.
74	N/A	NEW: Support the co-location of renewable technologies with other supporting technologies and complementary land uses, including agriculture, amenity, forestry and opportunities to enhance biodiversity and promote

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NPO	2018 Objective	2024 Objective																																										
		heritage assets, at appropriate locations which are determined based upon the best available scientific evidence in line with EU and national legislative frameworks.																																										
75	N/A	<p>NEW: Each Regional Assembly must plan, through the Regional Spatial and Economic Strategy, for the delivery of the regional renewable electricity capacity allocations indicated for onshore wind and solar reflected in Table 9.1 below, and identify allocations for each of the local authorities, based on the best available scientific evidence and in accordance with legislative requirements, in order to meet the overall national target.</p> <p>Table 9.1: Regional Renewable Electricity Capacity Allocations</p> <table><tr><th>Region</th><th>Energised capacity 2023 (MW)</th><th>Additional Renewable Power Capacity Allocations (MW)</th><th>Total % of National Share in 2030</th><th>Energised Capacity 2023 (MW)</th><th>Additional Renewable Power Capacity Allocations (MW)</th><th>Total % of National Share in 2030</th></tr><tr><td></td><td colspan="3">Onshore Wind</td><td colspan="3">Solar PV</td></tr><tr><td>Eastern and Midlands</td><td>284</td><td>1,966</td><td>25%</td><td>306</td><td>3,294</td><td>45%</td></tr><tr><td>Northern and Western</td><td>1,761</td><td>1,389</td><td>35%</td><td>0.3</td><td>959</td><td>12%</td></tr><tr><td>Southern</td><td>2,622</td><td>978</td><td>40%</td><td>138</td><td>3,302</td><td>43%</td></tr><tr><td>Total</td><td>4,667</td><td>4,333</td><td></td><td>445</td><td>7,555</td><td></td></tr></table>	Region	Energised capacity 2023 (MW)	Additional Renewable Power Capacity Allocations (MW)	Total % of National Share in 2030	Energised Capacity 2023 (MW)	Additional Renewable Power Capacity Allocations (MW)	Total % of National Share in 2030		Onshore Wind			Solar PV			Eastern and Midlands	284	1,966	25%	306	3,294	45%	Northern and Western	1,761	1,389	35%	0.3	959	12%	Southern	2,622	978	40%	138	3,302	43%	Total	4,667	4,333		445	7,555	
Region	Energised capacity 2023 (MW)	Additional Renewable Power Capacity Allocations (MW)	Total % of National Share in 2030	Energised Capacity 2023 (MW)	Additional Renewable Power Capacity Allocations (MW)	Total % of National Share in 2030																																						
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Total	4,667	4,333		445	7,555																																							
76	N/A	NEW: Local Authorities shall plan for the delivery of Target Power Capacity (MW) allocations consistent with the relevant Regional Spatial and Economic Strategy, through their City and County Development Plans.																																										
77	Sustainably manage waste generation, invest in different types of waste treatment and support circular economy principles, prioritising prevention, reuse, recycling and recovery, to support a healthy environment, economy and society	Sustainably manage waste generation including construction and demolition waste, invest in different types of waste treatment and support circular economy principles, prioritising prevention, reuse, recycling and recovery, to support a healthy environment, economy and society.																																										
78	Enhance water quality and resource management by: <ul style="list-style-type: none">Ensuring flood risk management informs place-making by avoiding inappropriate development in areas at risk of flooding in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities;Ensuring that River Basin Management Plan objectives are fully considered	Enhance water quality and resource management by preventing and mitigating the risk of flooding by: <ul style="list-style-type: none">Ensuring flood risk management informs place-making by avoiding inappropriate development in areas at risk of flooding in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities.Taking account of the potential impacts of climate change on flooding and flood risk and consideration of the Flood Risk Management Climate Change Sectoral Adaptation Plan.Ensuring that River Basin Management Plan objectives are fully considered throughout the physical planning process.																																										

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NPO	2018 Objective	2024 Objective
	<p>throughout the physical planning process;</p> <ul style="list-style-type: none"> Integrating sustainable water management solutions, such as Sustainable Urban Drainage (SUDS), nonporous surfacing and green roofs, to create safe places. 	<ul style="list-style-type: none"> Integrating sustainable water management solutions, such as Sustainable Urban Drainage (SUDS), non-porous surfacing and green roofs, and nature based solutions, to create safe places.
79		NEW: Support the management of stormwater, rainwater and surface water flood risk through the use of nature-based solutions and sustainable drainage systems.
80		NEW: Support the retrofitting of existing environments to cater for surface water run-off through the use of nature based solutions, including the implementation by Uisce Eireann of Integrated Drainage Plans on a prioritised settlement basis.
81	Integrated planning for Green Infrastructure and ecosystem services will be incorporated into the preparation of statutory land use plans	Integrated planning for Green and Blue Infrastructure will be incorporated into the preparation of statutory land use plans while maintaining ecosystem services and ecosystem functions and conserving and/or restoring biodiversity .
82	Identify and strengthen the value of greenbelts and green spaces at a regional and city scale, to enable enhanced connectivity to wider strategic networks, prevent coalescence of settlements and to allow for the long-term strategic expansion of urban areas	Identify and strengthen the value of greenbelts and green and blue spaces at a regional and city and local scales, to enable enhanced connectivity to wider strategic networks and prevent coalescence of settlements and to allow for the long-term strategic expansion of urban areas. Promote and support an increase in the provision of green and blue spaces and tree canopy cover in settlements.
83	N/A	NEW: In line with the National Biodiversity Action Plan and the European Union Nature Restoration Law, and best available scientific information, regional and local planning authorities shall support the preparation of the National Restoration Plan
84	N/A	<p>NEW: In line with the National Biodiversity Action Plan; the conservation, enhancement, mitigation and restoration of biodiversity is to be supported by:</p> <p>Integrating policies and objectives for the protection and restoration of biodiversity, including the avoidance and/or minimisation of potential biodiversity impacts, in statutory land-use plan.</p> <p>Retention of existing habitats which are currently important for maintaining biodiversity (at local/regional/national/international levels), in the first instance, is preferable to replacement/restoration of habitats, in the interests of ensuring continuity of habitat provision and reduction of associated risks and costs.</p>
85	N/A	NEW: In line with the National Biodiversity Action Plan, planning authorities should seek to address no net loss of biodiversity within their plan making functions in line with the objectives of the National Biodiversity Action Plan.
86	<p>Enhance the conservation status and improve the management of protected areas and protected species by:</p> <p>Implementing relevant EU Directives to protect Ireland's environment and wildlife;</p>	<p>Enhance the conservation status and improve the management of protected areas and protected species by:</p> <p>Implementing relevant EU Directives to protect Ireland's environment and wildlife and support the objectives of the National Biodiversity Action Plan;</p> <p>Developing and utilising licensing and consent systems to facilitate sustainable activities within Natura 2000 sites;</p>

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NPO	2018 Objective	2024 Objective
	<p>Integrating policies and objectives for the protection and restoration of biodiversity in statutory development plans;</p> <p>Developing and utilising licensing and consent systems to facilitate sustainable activities within Natura 2000 sites;</p> <p>Continued research, survey programmes and monitoring of habitats and species</p>	Continued research, survey programmes and monitoring of habitats and species.
87	Conserve and enhance the rich qualities of natural and cultural heritage of Ireland in a manner appropriate to their significance	Conserve and enhance the rich qualities of natural and built heritage of Ireland in a manner appropriate to their cultural and environmental significance.
88	Facilitate landscape protection, management and change through the preparation of a National Landscape Character Map and development of guidance on local landscape character assessments, (including historic landscape characterisation) to ensure a consistent approach to landscape character assessment, particularly across planning and administrative boundaries	No change
89	Ensure the efficient and sustainable use and development of water resources and water services infrastructure in order to manage and conserve water resources in a manner that supports a healthy society, economic development requirements and a cleaner environment	Ensure the alignment of planned growth with the efficient and sustainable use and development of water resources and water services infrastructure, in order to manage and conserve water resources in a manner that supports a healthy society, economic development requirements and a cleaner environment.
90	Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes, heating systems with zero local emissions, green infrastructure planning and innovative design solutions	Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes, heating systems with zero local emissions, green and blue infrastructure planning and innovative design solutions.
91	Promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of	Promote the pro-active management of noise where it is likely to have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through Strategic Noise Maps, development and implementation of Noise Action Plans and national planning

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NPO	2018 Objective	2024 Objective
	life and support the aims of the Environmental Noise Regulations through national planning guidance and Noise Action Plans.	guidance and Noise Action Plans.

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
NPO 67	+	+	+	+	+	+	+	+	+
NPO 68	+	+	0/+	0/+	0/+	+	+/-	+	+
NPO 69	+/-	+/-	+/-	0/-	+/-	+/-	+/-	0/-	0/-
NPO 70	+	+	+	+	+	+	+	+	+
NPO 71	+	+	+	+	+	+	+	+	+
NPO 72	+/-	+/-	+/-	+/-	+	+	+/-	+/-	+/-
NPO 73	+/-	+/-	+/-	+/-	+	+	+/-	+/-	+/-
NPO 74	+/-	+/-	+/-	+/-	+/-	+	+	+/-	+/-
NPO 75	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
NPO 76	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
NPO 77	+	+	+	+	+	+	+	+	+
NPO 78	+	+	+	+	0	+	+	0	0
NPO 79	+	+	+	+	0	0	+	0	0
NPO 80	+	+	+	+	0	0	+	0	+
NPO 81	+	+	+	+	+	+	+	+	+
NPO 82	+/-	+/-	+/-	+/-	+	+	+	+/-	+/-
NPO 83	+	+	+	+	0	0	0	0	+
NPO 84	+	+	+	+	0	0	0	0	+
NPO 85	+	+	+	+	0	0	0	0	+
NPO 86	0	+	+	+	+	+	0	0	0
NPO 87	+	+	+	+	+	+	+	+	+
NPO 89	+	+	+	+	0	0	+	0	0
NPO 90	+/-	+/-	+/-	+/-	+	+	+	+/-	+/-
NPO 91	+	0	0	0	0	0	+	0	0

Assessment and Discussion:

This policy area addresses the transformation required nationally to ensure the overall quality of Ireland's environment. The revisions include further integration and alignment of the NPF with Ireland's climate ambition and also an increased focus on biodiversity, water, air quality and land use in the context of land use planning. In particular, a new set of polices relating to onshore renewable energy has been included to support targets for renewables needed for to achieve the national climate objective.

NPO 67 includes a specific reference to climate legislation. This reflects the key legislative development which is the Climate Action and Low Carbon Development (Amendment) Act, which was enacted in 2021 with a commitment to a binding target to reduce greenhouse gas (GHG) emissions by 51% by 2030, and to increase the share of electricity generated from renewable sources by up to 80% over the decade (2021 – 2030), and to achieve net-zero emissions no later than 2050. The Act also references the need to comply with the Climate Action Plan [CAP] (an annually updated plan – with the current iteration being CAP24) and

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relevant carbon budgets and targets. The additional reference to 'climate' will have direct positive impacts for CF in the short to long term and indirect positive impacts for all other environmental factors as it relates to achieving climate targets.

NPO 68 has been amended to integrate specific reference to re-use of existing buildings and structures. This will have direct positive short to long term impacts for PHH, CH and LandS where derelict buildings and structures, including those of heritage value, can be brought back into use, with the effect of improving communities and the long-term protection through use of heritage feature. Positive impacts are also anticipated for CF, AQ, MA, BFF, and W from reducing the need for greenfield development and use of new materials associated with development, all of which have their own carbon footprint. Notwithstanding these positive impacts, negative impacts can also occur for CH, MA and LandS (via changes to townscapes, historical setting or landscape character) and BFF through the re-use of derelict properties resulting in effects such as damage to heritage features and disturbance of birds / bats which may be nesting or roosting in older structures. Careful consideration of these impacts is therefore needed prior to any works commencing, and in this regard, the development of a guidance note or similar on reuse of buildings to acknowledge the issues associated with built and natural heritage potential should be developed to alert developers to the potential conflicts and the possible need for an architect and / or ecological survey before works can commence. It is noted this NPO was updated to specifically reference sustainable re-use and also to acknowledge the need to conserve cultural and natural heritage when supporting such re-use.

NPO 69 is a newly introduced objective supporting renewable heat sources and generation. This will have positive impacts for PHH, AQ, CF and MA in particular given that the Sustainable Energy Authority of Ireland's (SEAI) National Heat Study¹²¹ found that 38% of all energy consumption in Ireland is used for heat. Fossil fuels (namely oil, gas and solid fuels such as wood, coal and peat) are still the primary means for heat generation. This energy is used in four key sub-sectors: residential, industry, services and agriculture/fisheries. Residential heat demand is the largest consumer of heat energy in Ireland. The residential sector emitted 9.8 MtCO₂eq in 2021, which was 27.5% of Ireland's total energy emissions. The industry sector emitted about 6.1 MtCO₂eq, and commercial sector and public services emitted a total of 6.2 MtCO₂eq. Where the heat mode can be decarbonised via increasing electrification of heat sources (e.g., via heat pumps) and through the expansion of geothermal and district heating (which makes use of waste heat from industrial/commercial sources) this will have direct positive effects for the interrelationship between CF, AQ, PHH and MA, where fossil fuel energy use can be reduced and offset for heating and/or cooling applications. However, there are negative impacts associated with the deployment of alternative renewable generation sources which need to be recognised and considered alongside the support for such developments. For example, geothermal energy can have negative effects on AQ, LS, BFF, CH and W depending on the type of system used (e.g., open or closed loop) and the depth (shallow or deep). The potential for impacts arises from ground disturbance which is required to facilitate exploration/testing activities as well as installation of infrastructure. The degree of potential disturbance will be related to the specific technology types and the scale of the development; geothermal technologies will have more localised impacts compared to geothermal technologies for larger scale commercial/industrial uses. Short term temporary impacts to PHH and AQ may arise during the exploration/testing phase of a geothermal project development, arising from e.g., dust and noise generation during drilling for boreholes. Implementing district heating networks can lead to short term impacts on PHH and MA via e.g., disruption to utilities and road transport from the installation of pipework. There may also be visual intrusion from boreholes and related plant during exploration. This is balanced against the direct positive medium and long term operational effects from renewable and sustainable sources of heat. With the increasing rollout and target for retrofits of homes and businesses and the use of heat pumps (which run on electricity), the fuel source for electrification of heating is also a particular concern in the short to medium term where fossil fuel use may still be a factor until renewable sources of electrification can meet demand. This could result in short to medium term negative effects for continuing carbon emissions for all environmental factors. Heat pump technologies also utilise refrigerants as part of the heat exchange system, many of which currently rely on fluorinated gases (F-gases) as the refrigerant, however they are highly potent greenhouse gases. With the increased and ramped-up ambition to install tens of thousands of heat pumps in Ireland up to 2030 as part of energy efficiency/energy reduction measures in the built environment, this can lead to potential for likely indirect cumulative negative effects in the short and medium term for CF, MA and PHH arising from the increased demand for fluorinated-gases in these applications. The use of potent fluorinated gases for heat pumps will have a knock-on negative effect

¹²¹ SEAI (February 2022) National Heat Study: Net Zero by 2050 – Key Insights, Evidence and Actions. Available at: <https://www.seai.ie/data-and-insights/national-heat-study/>

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in terms of appropriate management and disposal of these gases once this heat technology becomes redundant. The phasing out or replacement of these gases in the medium and longer term (which is being driven by national implement of Regulation (EU) No 517/2014 on F-Gases) will ultimately be overall positive.

NPO 70 has been amended to integrate specific reference to adopted carbon budgets for Ireland. This is broadly and directly positive for CF and indirectly positive for the remaining SEOs.

NPO 71 has changed the reference from 'low' to 'zero' carbon economy by 2050, to be more in line with the national climate objective, which is stated in the Climate Action and Low Carbon Development (Amendment) Act 2021 as: *"The State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy"*. The text amendment is directly positive for CF with indirect positives for all other environmental factors, however it would benefit from clarifying further from 'achieving a zero-carbon economy' to 'achieving a climate neutral economy', as emissions other than carbon (e.g., nitrous oxide, methane, fluorinated gases etc.) also need to be reduced in order to achieve net zero emissions. However, for consistency with the wording of the national climate objectives, amending further from 'zero carbon' to 'climate neutral' would be the more accurate reflection of the wording in the 2021 Act, and would also recognise that there are greenhouse gas emissions other than carbon dioxide which must also be reduced.

NPO 72 and 73 relate to grid development and interconnection respectively. EirGrid and SONI plan and operate the electricity system in Ireland and Northern Ireland. They have recognised in their roadmap to achieve renewable ambitions that there is a need for significant investment in the all-island grid if the ambition is to be met, and specific reference is made to the need for national policy support, funding and public acceptance. Grid infrastructure is a key enabler for the use of renewable energy sources from onshore and offshore generators. Without significant improvement and expansion, Ireland's electricity grid infrastructure will be a limiting factor in delivering renewable targets. In 2020, 42% of all electricity generated in Ireland came from renewable sources, in 2021, 36.4% of all electricity was from renewable sources. To meet the 2030 target of 80% renewable electricity, existing grid infrastructure will need to increase significantly due to increasing electricity demand. These NPOs will help to develop an expanded, flexible, stronger and adaptable electricity grid, which supports the deployment of significant variable renewable energy technologies, ensuring security of supply to demand centres and future-proofing our electricity system in the transition towards increasingly electrified and a net-zero economy.

Through maximising the efficiency of the renewable electricity and grid interconnection, there will be direct positive impacts on AQ, CF and MA through the generation and delivery of renewable electricity to end users. Subsequently there will be indirect positive impacts on PHH, BFF, LS, W, and CH/LandS where existing infrastructure can be upgraded and avoid the need for new greenfield development. However, grid transmission infrastructure can have significant long term negative impacts particularly where overhead line and higher voltage lines are involved and the associated construction and enabling works for new nodes and connections on the transmission and distribution grids. This can result in negative effects for BFF from collision with the lines, for LandS from changes to landscape character, for LS from altered land use and to PHH from the presence/proximity of the lines e.g., from impacts to view, as grid infrastructure can be large scale and to W from pollution and release of suspended solids. Underground lines can also have negative impacts in the shorter term during the construction stage for LS, W, CH, PHH, AQ and MA where roads may need to be used to house the cables or there is disturbance to heritage features/setting, and potential for disturbance to the ground/watercourses where underground crossings of rivers/streams are required, and temporary disturbance to local travel patterns e.g., where roads are closed, or diversions are in place during construction. There is potential for impacts on LandS where underground lines must connect into above-ground infrastructure, such as substations. Operational interconnections with other jurisdictions are directly positive for MA and CF over the medium and longer term, as interconnection directly contributes to energy security by allow imports of electricity from other countries where demand requires and will enable Ireland to export excess generation where feasible.

NPO 74 is a new NPO that supports the co-location of onshore wind, solar or other emerging technologies with other complementary land uses. Typical examples might include livestock grazing in and around solar farms. Such co-location efforts can offer a number of benefits both in terms of maximising the renewable generating capacity of the national land bank and concentrating grid connection requirements, while allowing for other land uses/activities to operate. This would have short, medium and long term direct and indirect positive effects on PHH, MA, LS and CF as a result. The NPO would be strengthened by including a

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reference to ‘restoration’ and ‘in line with EU and national commitments’, given the NPO’s reference to biodiversity.

In relation to the deployment of renewable electricity projects and associated infrastructure, in general, this is broadly positive for CF through the continued decarbonisation of the electricity generating market as well as for MA through increased security of supply of an indigenous generating capacity and ensure greater resilience in the economy. In addition, the development of renewable electricity infrastructure has broader positive impact on AQ and PHH through reduced air pollution from decreased fossil fuel based electricity generation as well as through the reduced effects of GHG emissions/climate change on BFF, W and LS.

Deployment of renewable energies will however have significant potential for negative effects on environmental receptors particularly BFF, LS, W, AQ, LandS and CH from construction activity and permanent impacts on LandS, BFF, LS during operation including disturbance and fragmentation of habitats and species, changes to landscape character and land use change, and impacts on views/landscape character and cultural heritage features or setting. These impacts may be mitigated through appropriate site and route selection, thoughtful design, and project-level mitigation. Feasibility studies should therefore be conducted to assess potential areas located in close proximity to larger industrial parks and brownfield areas with regard to co-location considerations. Guidance for co-location should be developed for different community settings in Ireland, as there will be differences between rural and urban settings. The NPO should also clearly link to the need for robust constraints analysis and site / route selections to underpin decision-making on where and what is appropriate.

However, climate change and decarbonisation cannot be addressed at the expense of nature/biodiversity, as they are inter-related. The supporting text of the NPOs states “a careful balance will be required between the realising the potential for renewable energy development to meet sectoral emissions targets, and the management of the potential for environmental impacts in terms of the protection and restoration of nature and cultural heritage in peatlands.” It is noted that legally “balance” may not deliver compliance with EU biodiversity-related legislation and derogations may be required where suitable alternatives cannot be found. This is particularly relevant in terms of compliance with the objectives of the Habitats Directive (Directive 94/43/EEC), the Birds Directive (Directive 2009/147/EC) and the Water Framework Directive (Directive 2000/60/EC) if impacts are to be avoided for W, BFF and LS. It is noted that in December 2022, the Regulation (EU) 2022/2577 was published laying down a framework to accelerate the deployment of renewable energy across the EU. In particular, Article 3 of this Regulation provides that the planning and operation of renewable energy infrastructure shall be presumed as being in the overriding public interest and serving public health and safety for the purpose of Article 6(4) of the Habitats Directive. It does not exempt projects from Article 6(3). Other Articles in the Regulation do exempt certain renewables projects and related infrastructure from certain aspects of other environmental assessments however this is not a blanket exemption. In some cases, only specific species assessments are exempted and in others it is only in cases where SEA has been undertaken on an area for example.

Notwithstanding any exemptions, avoidance of significant effects on the receiving environment should remain a key tenet of such developments. Robust site / route selection should be the starting point to avoid impacts by looking at alternative locations and technologies which avoid conflicts with other important environmental obligations. The nature and scale of the proposal is also of particular note. For instance, rooftop solar installations on school or farm buildings are unlikely to yield significant effects. However, larger solar farms, particularly if they become clustered in certain areas where the solar generation capacity is favourable, may give rise to significant environmental effects for BFF, PHH and LandS in particular. A guidance notes to support by planning authorities and developers on key considerations would benefit both.

NPO 75 is a new NPO which identifies the Regional Authorities as key gatekeepers for delivery of onshore wind and solar targets. Regional targets have been included in the draft first revision to the NPF. These have been derived from early constraints analysis work carried out by SEAI and DECC as part of the Renewable Electricity Spatial Policy development which has used GIS to identify broad areas as follows:

- *Strategic Areas: Areas with the strong potential to deliver sufficient capacity at commercial or grid-scale scale required to meet the national and regional targets.*
- *Priority Areas: These areas will be a subset of Strategic Areas. They are areas with low levels of environmental sensitivity and the most potential to swiftly deliver renewable energy projects.*

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- *Potential Areas: Areas where environmental sensitivities reduce the opportunity for extensive projects, but which may still contribute considerable generation capacity.*
- *Limited Potential: Areas that appear to have more limited potential for large scale deployment of wind and solar, but within which there may still be localised opportunities for renewable projects, to be considered on a case-by-case basis.*

Applying a uniform approach will make it easier to align the classification of areas across administrative boundaries. The combined 'Priority' and 'Strategic Areas' should strive to direct development towards areas that are expected to have the least significant environmental impacts and / or constraints.

NPO 76 is a further new NPO which also sets out that local authorities shall plan for the delivery of power capacity allocations consistent with the regional level planning. This will allow for local-scale (at city and county level) environment issues to be considered in terms of local planning for renewable energy.

Both NPO 75 and NPO 76, with delivery of onshore wind and solar electricity capacity generally and there is potential for direct positive impacts for MA and CF and broader positive indirect impact on AQ and PHH through reduced air pollution from decreased fossil fuel-based electricity generation as well as through a reduction in GHG emissions/the effects of climate change on BFF, W and LS. However, there is also potential for indirect negative impacts individually and cumulatively from delivery of the regional targets. The land bank available to accommodate the onshore targets set out in the Climate Action Plan (6GW wind/ 5GW solar by 2025; 9GW wind/ 8GW solar by 2030) may mean development becomes concentrated in certain areas or is constrained by environmental sensitivities to be located in certain areas, which could lead to cumulative effects. This includes direct and indirect negative impacts to LandS and PHH associated with development of wind turbines and solar panels resulting in negative effects such as land use change, visual intrusion, shadow flicker, and glint/glare etc., impacts on LS from land use change effects, impacts on BFF from increased collision risk, disturbance and fragmentation of habitats and disturbance and displacement of species and on W from increased run-off and drainage. There is also potential for short term temporary impacts to all environmental receptors from various effects arising from construction and enabling works which can impact negatively on BFF, W, LS, AQ, CH and LandS in particular.

The variations in, for instance, development patterns, resource availability and landscapes etc. between the three regions will also potentially influence environmental sensitivities, as each Regional Assembly possesses unique characteristics and resources that can contribute to Ireland's ambitious renewable electricity targets. However, the benefits that arise from renewable generation infrastructure should be equitably distributed to align with sustainable planning and development. Within NPO75, Regional Assemblies must consider the maximum potential contribution to the State's energy requirements. This is based on available land, generation potential and environmental designations in the preparation of spatial plans and ensure that administrative boundaries do not result in a barrier to the State meeting its renewable energy targets. A fully supportive planning framework for renewable energy projects and enabling infrastructure/technology is essential whilst ensuring the principles of good planning are maintained and the long-term public interest and safety is protected. As a follow-on to allocating regional targets, the subsequent identification or designation of any 'go-to' areas for onshore renewables, while broadly positive in principle, should align with the Phase 2 Land Use Review outputs when available (noted this work is underway and expected to be available in 2025), consider cross-sectoral compliance issues, and avoid any cross-sectoral conflicts and address the potential for cumulative effects. Utilising the outputs of the Land Use Review Phase 2 will be critical to inform decision-making in land use planning which has implications across all the SEOs, as stated in the Programme for Government – Our Shared Future: *"Optimal land use options inform all relevant government decisions. The review will balance environmental, social, and economic considerations and involve a process of evaluation of the ecological characteristics of the land. It will include consideration of emissions to air and water, carbon sequestration, and climate adaptation challenges."* Reaching the Government's targets for climate action and the green energy transition should not come at the expense of unintended effects on other sectors and wider environmental considerations. Climate action and the energy transition will directly and indirectly help the wider environment by mitigating and adapting to changing environmental conditions and anthropogenic effects, but sectoral measures themselves also have potential to impact on wider environmental aspects, individually and cumulatively, unless there is coordinated action. This is relevant for all sectors which require a land footprint or land change to enable all types of land use planning decisions e.g., grid infrastructure, energy production including onshore wind, road schemes, public transport projects (greenways, cycleways, railways), forestry (areas of felling, areas for afforestation, areas for protection), areas for food production, areas for biodiversity protection (designated areas and ecological corridors, peatland and wetlands) etc. All elements need to be examined holistically, so that there is effective

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knowledge sharing and coordination of climate action activities. In this context, the outputs of the Land Use Review work are very relevant for informing land use and spatial planning.

Unless competing interests (which can also include synergistic aspects and co-benefits) are identified, coordinated, and addressed from the top down, the pressures on biodiversity and 'natural capital' in particular, means less resilient and degraded ecosystem services upon which all sectoral activities depend.

In terms of renewable acceleration areas, the draft first revision to the NPF should acknowledge and reference that any such designation process will include a robust sites and constraints analysis to ensure that environmental sensitivities are considered at an early stage. This is particularly crucial as the revised Renewable energy Directive (RED III) requires Member States to “*map and designate Renewable Acceleration Areas for onshore renewables as required following transposition of the revised Renewable Energy Directive.*” While Member States (including Ireland) must transpose RED III into national law by 21 May 2025, certain provisions (most notably those aimed at accelerating permit-granting procedures) must be transposed into national law by 1 July 2024. When Member States voted on the adoption of the RED III Regulations, Ireland was alone in issuing a ‘cautionary statement’ along with the Irish vote which was attached to the Regulations but not answered. Ireland wrote:

- *“Ireland has concerns over the lack of clarity in the [sic] certain aspects of the text of the Proposal and how it interacts with other EU environmental Directives, in particular the Habitats Directive.*
- *Ireland asks the European Commission [to] issue guidance as to how the Regulation interacts with the other EU environmental Directives, in particular the Habitats Directive, to avoid any legal issues arising in the implementation of the measures.*
- *Ireland fully supports increasing the rollout of RE projects. However, Ireland is concerned that a lack of alignment with other EU environmental Directives could lead to legal challenge and uncertainty, which would have the undesired and contradictory effect of slowing down the delivery of essential renewable projects.”*

On 14 May 2024, a Commission Recommendation¹²² was issued “on speeding up permit-granting procedures for renewable energy and related infrastructure projects”. The recitals to the Guidance include that most barriers to permit-granting have already been identified at Member State Level, and that solutions must be found within existing legal frameworks. It is clear therefore that Ireland has concerns with rationalising the implementation of the requirements of RED III with existing environmental protection law and it is also clear that the Commission expects Member States to find solutions. The role for strategic planning is therefore crucial to underpin decision making and SEA will therefore be a critical process to deliver sustainability in this area. The undertaking of SEA (and AA) at the regional and county scale will be crucial for ensuring that there is consideration of environmental sensitivities while the State and the Regional Authorities decide on how best to comply with energy and climate law. A key aspect of this will be affording adequate time and resources to the SEA processes and engaging with the process early.

The regional targets for onshore wind show that the greatest allocation is in the Southern region (40%) followed by the Northern and Western Region (35%) followed by the Eastern and Midland region (25%). The greatest allocation for solar is in the Eastern and Midlands region (45%) and Southern region (43%) followed by the Northern and Western region (12%). It is noted that the regional targets have been developed through a multi-criteria geospatial analysis carried out on behalf of SEAI and DECC. Among the criteria employed was the human, natural and built environment (see **Appendix D** for the methodology applied). This analysis offered a high level of protection for receptors listed as exclusion criteria (domestic dwellings, main rivers, lakes, transitional water bodies, freshwater pearl mussel catchments and within 10km of UNESCO World Heritage Sites) ensuring that potential for adverse impacts to PHH, BFF, W and CH is managed at national level through these exclusions. Further, albeit a lower level of protection is provided through the sensitivity criteria for features such as SAC, SPA, Ramsar sites, NHA/pNHA, Annex I Habitat, salmonid rivers, flood risk areas, landslide susceptibility, groundwater vulnerability and geological heritage sites providing some protection to BFF, W, CH and LS. In this regard, the determination of the regional targets offers an appropriate scale of protection to the environment through the geospatial mapping, which starts the journey of mitigation of potential significant impacts which will be refined through the lower tiers of planning. Further mitigation will be applied through SEA and AA at lower tiers in the planning hierarchy. For instance, where

¹²² COMMISSION RECOMMENDATION (EU) 2024/1343 of 13 May 2024 on speeding up permit-granting procedures for renewable energy and related infrastructure projects. Available at: <https://eur-lex.europa.eu/eli/reco/2024/1343/oj>

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regional targets are addressed through the regional land use planning tier, this offers the opportunity to provide for appropriately scaled regional mitigation, which can take into account regional environmental characteristics and sensitivities. Any such regional planning policy will itself be subject to SEA and AA. Similarly, the translation of regional targets into county/local level targets for inclusion in local land use planning policy, as outlined by NPO 76, will provide a further tier of SEA and AA consideration of these targets, whereby such policies may be further mitigated. The potential for adverse effects will also be considered and mitigated via development management controls undertaken at the project level. Such tiering of assessments will help ensure adverse impacts are avoided or mitigated at the appropriate scale and level of detail. In short, given the level of environmental protection applied at national level through the geospatial analysis coupled with subsequent regional and local SEA and AA of the implementation of these targets, and ultimately via project level planning potential for significant impacts can be avoided or substantially reduced.

NPO 75 and 76 do not include any mandatory limits in terms of separation distance or standards for control of noise, shadow flicker, glare etc. It is not clear how this is to be regulated through the planning system especially as solar farm developments do not fall under projects of a type for EIA. Delivery of the targets identified in these two NPOs will have indirect negative impacts for PHH MA and LandS in particular. Cumulative impacts could also arise where solar farms are, for instance, co-located with a wind farm development. There is also no mention of community benefit or community gain. It is noted that Wind Energy Guidelines dating to 2006 are in the process of being updated, however this has been the case for a number of years. It is now a commitment in CAP24 also. This will assist with planning for onshore wind developments and is to be welcomed but will not address solar or co-location. Clear up to date guidance to support delivery of this regional ambitions is required to provide certainty. Reference to international / national best practice should also be included.

NPO 77 includes specific reference to construction and demolition waste in terms of sustainable management of wastes. This will have indirect positive impacts for all environmental receptors as it specifies additional categories of waste in terms of circular economy principles, diverting waste away from lower tier options for management e.g., reuse over recovery. A specific reference to “resource” and waste management would be more in keeping with current circular economy best practice. Waste streams should be considered in terms of their potential to become a resource, in line with the waste hierarchy.

NPO 78 includes additional reference to flood risk and the potential impacts that can arise as a result of climate change, as well as an addition that recognises nature-based solutions (NbS). The additions to NPO 78 will have direct positive effects across environmental receptors, and in particular PHH and MA in terms of ensuring that future development is accommodated in the correct location and that citizens’ and strategic infrastructure are not adversely impacted by flooding. Alongside the development of the first revision to the NPF, a Strategic Flood Risk Assessment (SFRA) is being undertaken to ensure that the policy objectives are robust in relation to current flood risk and future predictions which account for climate change. It has outlined that implementation of the Planning System and Flood Risk Assessment Guidelines for Planning Authorities (2009) and best practice for storm water run-off is vital to achieve sustainable development and reduce flood risk to areas. The integration of sustainable water management solutions will be directly positive for W in relation to reduced waste of water resources and for BFF and LS through ensuring that clean water is released with a flow that is compatible to the surrounding environment. Pollution from urban drainage (e.g., nutrients, sediments, hydrocarbons, historic contamination) is identified as an existing pressure for water quality and for water dependant species and habitats. Development seeking consent must therefore ensure, through its design and operation, that it will not contribute additional pressures from urban drainage pollution. Where possible opportunities to improve historic drainage issues such as over culverting should be taken e.g., opportunities for daylighting.

NPO 79 is a new policy objectives that supports the management of stormwater rainwater and surface water flood risk through the use of NbS and SuDS.

NPO 80 supports retrofitting existing environments to cater for surface water run-off through NbS and the implementation of Uisce Éireann’s Integrated Drainage Plans. These NPOs are very relevant for the aims of the NPF and compact growth within existing settlement envelopes – this is directly positive over the short and longer term for PHH, MA, and also indirectly for LandS, where such retrofitting enhances the urban environment, as NbS and SuDS can contribute positively to urban character and setting. It is important that as part of this aspect, urban spaces integrate or retrofit natural solutions into the built environment, both for the positive impacts access to blue and green spaces has for health and wellbeing, while also implementing and achieving surface water management. It is noted the DHLGH has published interim *Guidance on Best Practice for NbS for the Management of Rainwater and Surface Water Runoff in Urban in Urban Areas*.

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Planning for such features as part of Green and Blue Infrastructure Strategies would have additional benefits for PHH, BFF, W and MA by delivering multi-benefit solutions for communities, climate, water and biodiversity.

These additions to NPO 78 and the new NPOs 79 and 80, therefore have direct and indirect positive impacts across W, BFF, LS, MA and PHH and LandS where stormwater, surface water and flood risk are better managed in urban areas which has positive implications for the natural and built environment and general resiliency of infrastructure. However, while broad and general policy support for NbS and SuDS is welcomed it can no longer be seen as an optional approach in developments. As built environments increase in terms of their compactness/density, it is critical that natural and sustainable solutions are integrated as much as possible.

NPO 81 promotes integrated planning for green and blue infrastructure through statutory land use plans which is positive for all of SEA objectives as this resource will perform positive functions for communities and the natural, built and human environment. Both green and blue infrastructure is increasingly recognised as a vital competent to building resilient communities which brings direct benefits to the natural, built and human environment and in particular can directly contribute to communities adapting to climate change. The addition of 'blue' alongside green infrastructure is a positive addition, as it recognises that blue infrastructure is just as beneficial and significant as green infrastructure in terms of the presence of and access to nature generally and opportunities to enhance understanding of natural and built heritage features in the wider community with positive effects for CH. The NPO is further amended to acknowledge a wider definition of green and blue infrastructure to include ecosystem services and ecosystem functioning which is directly positive for BFF, W and LS over the short to longer term as it recognises that Green and Blue infrastructure is vital for biodiversity wellbeing also. The policy could be further enhanced by linking it to plans for urban greening at settlement level. The NPO is also indirectly positive for CF over the longer term, as healthy and resilient ecosystems have a direct role to play in emissions removals.

NPO 82 recognises the value of blue and green spaces at both regional and city scale. The proposed additions to the NPO aim to promote and support increased provision of green/blue spaces as well as increase tree canopy cover in the settlements, which is broadly positive across the SEOs. The tree cover element reflects one of the key objectives of the new proposal for an EU Nature Restoration Law, which proposes that that Member States shall ensure a minimum 10% tree cover in all cities and in towns and suburbs. Incorporating more trees into settlements can also have added benefits for PHH, AQ, MA, BFF, LandS and CF, not just through positive effects on health and wellbeing from greater access to nature in urban areas, but as to help combat some effects from climate change as tree cover can reduce urban temperatures, and the right planting can also assist with natural surface water drainage. It can also provide important habitat for species in urban settings. Green and blue infrastructure development does however have potential for both direct and indirect negative effects on PHH, BFF, W, LS, CH and LandS through e.g., loss or sterilisation of greenfield lands, changes to access, habitat fragmentation, species disturbance, permanent visual impacts, pollution of waterbodies, spread of invasive species etc. an acknowledgement of the importance of sensitive routing / siting of infrastructure is there for required.

NPO 83 confirms a requirement within the NPF that regional and local planning authorities, in line with the National Biodiversity Action Plan, and the European Union Nature Restoration Law and best scientific information must support the preparation of the National Restoration Plan. This NPO is directly positive for BFF and indirectly for PHH, W, LS and LandS. The NBAP 2023-2030 commits to putting a National Restoration Plan in place by 2026 to contribute to the ambition of the EU Biodiversity Strategy 2030 and restoration targets. The programme of work for the plan will include for key themes focussing on the impact of the Regulation on Land, Marine and Urban environments and stakeholders will be encouraged to get involved. The NPO is positive in this regard as it will ensure that land use planning authorities are also involved in the process. This NPO is noted to have been added following iterative feedback from the SEA and AA teams.

NPO 84 confirms a support within the NPF for conservation, enhancement, mitigation and restoration of biodiversity. This is welcomed as it is a recognition that there is a biodiversity crisis which was documented by Government alongside the climate crisis however the same impetus is not always evident. This is despite the biodiversity and climate crises being inter-linked. The NPO will have direct and indirect positive effects for BFF, W, LS, PHH and LandS in the short to longer term as these policies are translated into land use plans

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from regional to local level. It is noted this additional NPO was included following iterative feedback from the SEA and AA teams.

NPO 85 recognises the need for planning authorities to address no net loss of biodiversity within their plan making functions in line with the objectives of the National Biodiversity Action Plan. As above, this is welcomed. The concept of no net loss and biodiversity net gain has been moving into mainstream planning in the intervening period since the first NPF was published. While the concept is directly positive for BFF and indirectly for PHH, W, LS and LandS as it seeks to protect biodiversity features within the landscape, the reality is there is little or no national guidance on how this should be measured and importantly how it can be addressed where loss is identified, be it through planning or design. The NPO needs to go further to commit to developing guidance to support planners and developers in achieving real effect from this NPO. The expertise for such guidance will require collaborative effort between the DHLGH, NPWS and others.

NPO 86 will have direct positive impacts for BFF in particular through alignment with and integration of the *National Biodiversity Action Plan 2023-2030*, which for the first time has a legal footing underpinning the various actions included and the role out of the objectives of the NBAP 2023-2030 will be for direct benefit of BFF. Indirect positive impacts for the wider environmental receptors of W, LS, AQ and CF. The proper integration of environmental and ecological policies must be approached from a position of real integration rather than through mitigation measures after the fact. Defining the value of environmental and ecological resources is essential to integration if current practices are to change. Research and evidence base are essential to providing decision makers with the tools to facilitate sustainable development and prevent inappropriate development/ activities. The requirement for monitoring in the 2014 EU EIA Directive may assist in this regard. The addition of supporting the objectives of the National Biodiversity Action Plan is welcome and positive, as biodiversity loss comprises a major global crisis and biodiversity must be mainstreamed further into decision and plan-making in order to halt and reverse losses. It is noted that the bullet “Integrating policies and objectives for the protection and restoration of biodiversity in statutory development plans” has been deleted in this revised NPO, however the text is retained and has been relocated under NPO 84 instead.

NPO 87 includes the addition of the word ‘built’ with heritage and ‘cultural and environmental’ significance; this is broadly positive for all SEOs, clarifying the meaning that ‘heritage’ comprises both natural and built environment aspects.

NPO 89 has been modified to address with the alignment of planned growth with the efficient and sustainable use and development of water resources and water services infrastructure. The commitment to alignment is critical to avoid negative effects from the population growth outlined in the draft Plan. Where growth exceeds capacity, this can have negative effects on W, BFF, LS, PHH and MA, resulting in contamination of waterbodies, nutrient *enrichment of waterbodies and contamination of drinking water supplies*.

NPO 90 is unchanged except for the addition of ‘blue’ alongside green infrastructure; ‘blue infrastructure’ typically relates to both natural and created urban and peri-urban waters such as ponds, lakes, streams/rivers and storm water solutions. This is a broadly positive addition as long-term planning recognises that blue infrastructure is just as beneficial and significant as green infrastructure in terms of the presence of and access to nature and water-based spaces in urban areas generally, which has direct positive effects for PHH and MA and indirect positive effects for BFF and W where additional suitable habitat can be created. Presence of and access to green and blue infrastructure are beneficial for PHH, MA, AQ, LandS and CF, as such spaces are important for overall wellbeing. However, where greenbelt or blueway provisions take the form of e.g., greenways, peatways etc., as with any linear infrastructure development, there is potential for both direct and indirect negative impacts on PHH, BFF, W, LS, CH and LandS through e.g., loss or sterilisation of greenfield lands, habitat fragmentation, species disturbance, permanent visual impacts etc. Furthermore, as the green and blue infrastructure does not proactively integrate biodiversity features and biodiversity protection and enhancement elements there is potential for mixed impacts for BFF, W and LS in particular.

NPO 91 includes additional text to include reference to Strategic Noise Maps and ‘development of’ Noise Actions Plans; the Environmental Noise Directive (END) 2002/49/EC requires Member States to prepare and publish, every 5 years, strategic noise maps and noise management action plans for transport noise sources (i.e., roads, railways and airports) and industry. Reference to strategic noise maps is therefore positive over the short and medium term namely for the PHH and MA as these maps help inform land use planning which

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allows for consideration of the implications of noise exposure as part of decision-making, particularly for people and communities, as excess noise levels are directly linked to health outcomes and wellbeing.

Mitigation Proposed:

- **NPO 68:** A guidance note on reuse of buildings to acknowledge the built and natural heritage potential should be developed by the OPR to alert developers to the potential conflicts and the possible need for an architect and / or ecological survey before works can commence. *This mitigation has partially addressed in the final draft NPO 68 however it does not include for a guidance note.*
 - Retrofit plans/works must consider impacts to other environmental receptors with particular attention paid to bats.
 - Retrofit plans/works shall consider historical setting / landscape character.
- **NPO 71:** The policy wording should be amended as follows: “...*achieving a zero-carbon climate neutral economy*”. This would reflect the wording of the national climate objective in the 2021 Act and recognise that there are greenhouse gas emissions other than carbon dioxide which must also be reduced.
- **NPO 74:** The proposed wording shall be amended to state: “*Support the co-location of renewable technologies with other supporting technologies and complementary land uses, including agriculture, amenity, forestry and opportunities to enhance biodiversity and promote heritage assets, at appropriate locations in line with EU and national commitments.*”
- **NPO 74:** Guidance is required to establish the expected environmental assessment requirements to support applications for renewable electricity projects that fall outside the mandatory requirement for EIA.
- **NPO 74:** Feasibility studies should be conducted at both Regional Authority and subsequently Local Authority level to assess potential areas located in close proximity to larger industrial parks and brownfield areas. Guidance for co-location should be developed for different community settings in Ireland, the guidance will differ between rural and urban settings.
- **NPO 74:** The NPO should clearly link to the need for robust constraints analysis and site / route sections to underpin decision-making on where and what is appropriate. *This mitigation has been partially integrated into the final draft NPO through the inclusion of a reference to locations being determined based upon the best available scientific evidence in line with EU and national legislative frameworks.*
- **NPO 75:** All new wind and solar projects of scale shall incorporate a community benefit scheme to ensure that benefit serves the community in a fair and balanced way.
- **NPO 75:** Adoption of the regional targets into the relevant Regional Spatial and Economic Strategy (RSES) will be subject to SEA and AA and any supporting policy base and/or spatial definitions provided in these RSES should be added in full to advise on any further mitigation at regional, local or project level. Similarly, in devising the maximum potential contribution of each local authority within the Region, the Regional Assembly will recognise the existing environmental criteria employed in the geospatial analysis carried out by the SEAI (see **Appendix D**) and will provide for a similar or enhanced level of environmental protection to that used to develop the targets. With regard to the accelerated permitting procedures required to be implemented by Member States under RED III, and in light of the regional renewable target being put forward, the role for regional-level SEA and AA will therefore be crucial.
- **NPO 75:** The Climate Action Plan sets out an Action to “Publish Regional Renewable Electricity Strategies”. It is unclear if these will be prepared as part of future updates to the RSEs or as standalone strategies. In either case, the Regional Renewable Electricity Strategies will be subject to SEA and AA.
- **NPO 75 and 76:** Adoption of the local targets developed by the Regional Assemblies into the relevant County and City Development Plans will also be subject to SEA and AA and any supporting policy base and/or spatial definitions provided in these.
- **NPO 75:** It is recommended that the DHLGH liaise with DECC and the Regional Assemblies on the preparation of the Regional Renewable Electricity Strategies. This will include development of guidance or similar on the consideration of cumulative effects, particularly given the scale of wind and solar PV development proposed in the CAP and the increased pace required to deliver this.
- **NPO 75:** Areas that are subsequently identified for onshore renewables must be informed by appropriate environmental assessment and consideration of sensitivities in the receiving environment. DHLGH, DECC, and other government stakeholders as relevant shall liaise on the identification process for any go-

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to/acceleration/designation areas for renewable energy. Discussions shall be informed by, but not limited to, the following: Land Use Review Phase 1 and Phase 2 work, existing Local Authority Renewable Energy Strategies, the future Regional Renewable Electricity Strategies, and the development of DMAPs.

- **NPO 75:** Identification of any areas to be designated for renewable electricity and or renewable energy will be supported by a quality site selection and environmental constraints analysis process that addresses environmental criteria such as landscape, cultural heritage, water quality, flood risks and biodiversity, as a minimum. **This mitigation has been partially integrated into the final draft NPO through the inclusion of a reference to locations being determined based upon the best available scientific evidence in line with EU and national legislative frameworks.**
- **NPO 76:** It is recommended that the following text is added, as it is presently unclear whether the Regional Renewable Electricity Strategies will be standalone or incorporated as part of the RSEs, and the publication of the latter is a specific action of the Climate Action Plan 2024: *“Local Authorities shall plan, through their City/County Development Plans, for the delivery of specified Target Power Capacity (MW) allocations consistent with the relevant Regional Spatial and Economic Strategy and Regional Renewable Electricity Strategy.”*
- **NPO 77:** It is recommended that the NPO include a specific reference to “resource” and waste management, as this would be more in keeping with current circular economy best practice.
- **NPO 79 and NPO 80:** This objective could be further improved by including a direct reference to the DHLGH Best Practice Interim Guidance Document: *Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas*.
- **NPO 79 and NPO 80:** These objectives should link to Green and Blue infrastructure provision in NPOs 81, 82 and 90 as additional benefits could be achieved for BFF and W where NbS and SUDs are integrated.
- **NPO 79:** The requirement to use NbS and SUDs as a principle should be strengthened to more than support as per proposed amendments: *Proposals for the management of stormwater, rainwater and surface water flood risk should demonstrate the application, to the extent possible, of nature-based solutions and sustainable drainage systems.*
- **NPO 80 :** The requirement to use NbS and SUDs as a principle should be strengthened to more than support as per proposed amendments: *Proposals for support the retrofitting of existing environments to cater for surface water run-off through shall demonstrate the use of nature based solutions, including the implementation by Uisce Eireann of Integrated Drainage Plans on a prioritised settlement basis.*
- **NPO 81:** Planning for Green Infrastructure benefit further from linking to plans for urban greening.
- **NPO 82:** This objective could be improved further by adding reference to the local level as follows: *“Identify and strengthen the value of greenbelts and green and blue spaces at a regional, city and local scale...”*. **This mitigation has been integrated into the final draft NPO.**
- **NPO 85:** It is recommended that the go further to commit to developing guidance to support planners and developers in achieving real effect from this NPO. The expertise for such guidance will require collaborative effort between the DHLGH, NPWS and others.
- **NPO 81, NPO 82 and NPO 90:** Green and Blue infrastructure provisions should be enhanced to incorporate biodiversity specific infrastructure provisions also to ensure that this element is proactively protected and planned for in these wider strategies.

8.3.10 Chapter 10 – Implementing the National Planning Framework

NPO	2018 Objective	2024 Objective
66	A more effective strategic and centrally managed approach will be taken to realise the development potential of the overall portfolio of state owned and/or influenced lands in the five main cities other major urban areas and in rural towns and villages as a priority, particularly through the establishment of a National Regeneration and Development Agency.	Deleted.
92	Provision will be made for Metropolitan Area Strategic Plans to be prepared for the Dublin, Cork, Limerick, Galway and Waterford Metropolitan areas and in the case of Dublin and Cork, to also address	Provision will be made for Metropolitan Area Strategic Plans to be prepared for the Dublin, Cork, Limerick, Galway and Waterford Metropolitan areas and in the case of Dublin and Cork, to also address

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NPO	2018 Objective	2024 Objective
	the wider city region, by the appropriate authorities in tandem with and as part of the relevant Regional Spatial and Economic Strategies	the wider city region, shall be reviewed by the appropriate authorities in tandem with and as part of a review of the relevant Regional Spatial and Economic Strategies.
93	<p>A Metropolitan Area Strategic Plan may enable up to 20% of the phased population growth targeted in the principal city and suburban area, to be accommodated in the wider metropolitan area i.e., outside the city and suburbs or contiguous zoned area, in addition to growth identified for the Metropolitan area. This will be subject to:</p> <p>any relocated growth being in the form of compact development, such as infill or a sustainable urban extension;</p> <p>any relocated growth being served by high capacity public transport and/or related to significant employment provision; and</p> <p>National Policy Objective 9, as set out in Chapter 4</p>	<p>The Dublin Metropolitan Area Strategic Plans, shall include provision for large-scale Transport Orientated Development (TOD) opportunities and may target a proportion of planned growth in the metropolitan areas towards the delivery of new sustainable communities at brownfield and greenfield locations in the principal city and suburbs areas and in the wider metropolitan areas focused on opportunities arising from existing and planned major public transport investment, along planned high capacity public transport corridors and in accordance with the principles of Transport Orientated Development.</p> <p>A Metropolitan Area Strategic Plan may enable up to 20% of the phased population growth targeted in the principal city and suburban area, to be accommodated in the wider metropolitan area i.e., outside the city and suburbs or contiguous zoned area, in addition to growth identified for the Metropolitan area. This will be subject to:</p> <p>any relocated growth being in the form of compact development, such as infill or a sustainable urban extension;</p> <p>any relocated growth being served by high capacity public transport and/or related to significant employment provision; and</p> <p>National Policy Objective 9, as set out in Chapter 4, and</p>
94	Statutory arrangements between spatial and transport planning in the Greater Dublin Area will be extended to other cities.	No change
95		NEW: The Government will work to establish the necessary institutional and funding arrangements to support the development and accelerated delivery of Transport Orientated Development at suitable locations in conjunction with the ongoing programme of investment in the public transport network.
96	Provision will be made for urban area plans, based on current local area plan provisions, and joint urban area plans and local area plans will be prepared where a town and environs lie within the combined functional area of more than one local authority.	Provision will be made for urban area plans and priority area plans, based on to replace current local area plan provisions; and joint urban coordinated area plans and local area plans will to be prepared where a town and environs lie within the combined functional area of more than one local authority, and the designation of areas with significant potential for development as Candidate Urban Development Zones and Urban Development Zones in order to facilitate focused investment in enabling infrastructure and accelerated development.
74	City/county development plan core strategies will be further developed and standardised methodologies introduced to ensure a co-ordinated and balanced approach to future population and housing requirements across urban and rural areas.	Deleted.
97	Planning authorities will be required to apply a standardised, tiered approach to differentiate between i) zoned land that is serviced and ii) zoned land that is serviceable within the life of the plan	No change

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NPO	2018 Objective	2024 Objective
98	When considering zoning lands for development purposes that require investment in service infrastructure, planning authorities will make a reasonable estimate of the full cost of delivery of the specified services and prepare a report, detailing the estimated cost at draft and final plan stages.	No change
99	When considering zoning land for development purposes that cannot be serviced within the life of the relevant plan, such lands should not be zoned for development	No change
73a	Guidance will be developed to enable planning authorities to apply an order of priority for development of land, taking account of proper planning and sustainable development, particularly in the case of adjoining interdependent landholdings.	Deleted.
100	Planning authorities will use compulsory purchase powers to facilitate the delivery of enabling infrastructure to prioritised zoned lands, to accommodate planned growth.	No change
101	Planning authorities and infrastructure delivery agencies will focus on the timely delivery of enabling infrastructure to priority zoned lands in order to deliver planned growth and development.	No change
102	N/A	NEW: Develop and implement new approaches to measuring and monitoring compact growth in cities and larger settlements aligned to increased digitalisation of the planning system.
103	Secure the alignment of the National Planning Framework and the National Development Plan through delivery of the National Strategic Outcomes.	Continue to Secure ensure the alignment of the National Planning Framework and the National Development Plan through delivery of the National Strategic Outcomes.
75	Ensure that all plans, projects and activities requiring consent arising from the National Planning Framework are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate.	No change. Relocated to chapter 1 of the draft Plan

Ref.	PHH	BFF	LS	W	AQ	CF	MA	CH	LandS
Previous NPO 66	0	0	0	0	0	0	0	0	0
NPO 92	+	+	+	+	+	+	+	+	+
NPO 93	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
NPO 95	+/-	0/-	0/-	0/-	+/-	+/-	+/-	0/-	0/-
NPO 96	+/-	+/-	+/-	+/-	+/-	+	+/-	+/-	+/-
Previous NPO 71	0	0	0	0	0	0	0	0	0
NPO 102	+	+	+	+	+	+	+	0	0
Previous NPO 73a	0	0	0	0	0	0	0	0	0
NPO 103	+	0	0	+	+	+	+	0	0

Key: **PHH:** Population & Human Health; **BFF:** Biodiversity, Flora & Fauna; **LS:** Land & Soils/Sediments; **W:** Water; **AQ:** Air Quality; **CF:** Climatic Factors; **MA:** Material Assets; **CH:** Cultural Heritage; **LandS:** Landscape.

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Assessment and Discussion:

Previous NPO66 has been deleted to acknowledge that the National Regeneration and Development Agency is now established. No significant effects from this deletion.

NPO92 has been amended to clarify the need to review the MASPs as part of the upcoming RSES reviews. No significant effects from this addition.

The first part of **NPO93** has been reworded to align with objective NPO10 in Chapter 2 and enablers D2 and C3 in Chapter 3 of the draft Plan. Please refer to those assessments.

NPO95 relates to establishing institutional and funding arrangements that will be required in order to support TOD, aligned with the investment programme in the public transport network. Support for delivering transport-oriented development can enable high density and people-intensive uses to occur alongside public transport. This NPO has potential for positive effects for PHH and MA, AQ and CF in particular where good integration of land use and transport can be integrated allowing people to exit private car use in favour of public transport, reducing transport related emissions. High-quality, high-capacity public transport options are critical to encourage the behavioural shift away from private car usage.

Notwithstanding that however, the intensification of people has negative effects especially if services are not delivered in advance or in tandem. Insufficient capacities can have indirect negative effects on PHH, W, BFF, MA, AQ and LS as a result of uncontrolled or inadequately treated emissions. Increased populations also have potential to put pressure on open space and wild areas to facilitate recreation. This can have negative effects on PHH, BFF, W, CH and LandS if visitor numbers lead to disturbance or deterioration in environmental quality as a result of access, littering or overuse. Much of the potential for negative effects can be avoided through phasing of delivery of population in line with capacity and robust route selection to avoid conflicts with sensitive receptors.

NPO96 has been revised to include the addition of 'priority area plans' and 'coordinated' in relation to area plans, in addition to the previous reference to urban area plans. The supporting text for the draft first revision to the NPF states that local area plans (LAPs) under the Planning and Development Act 2000, as amended, are proposed for replacement via the Planning and Development Bill 2023 by three new types of area plans. The aim is that these new categories of plans will (once enacted through legislation) enable planning authorities to provide a tailored response to particular contexts and development needs, informed by local community engagement, and to provide for greater certainty for stakeholders in terms of expected outcomes from the plan-making/consents processes. The NPO also includes for new text that areas will be designated where there is significant potential for development as Candidate Urban Development Zones and Urban Development Zones, with the aim of enabling focused investment in enabling infrastructure. The changes to the NPO are therefore broadly indirectly positive across SEOs, as it relates to focused small-area planning and the consideration of investment in enabling infrastructure. Any infrastructural development arising from this investment will be directly positive for PHH and MA as it will increase the availability of housing and supporting services in specified development zones. However, as with any infrastructural development, there is a potential for negative effects on PHH, BFF, LS, W, AQ, CH, MA and LandS during construction phase related to increased dust, noise, travel disruptions; disturbance, loss or fragmentation of habitats; loss of soil resource/soil sealing or hydrogeological effects; pollutant or construction debris run-off; alterations to heritage features/setting or landscape and views from new infrastructural elements unless proper siting and environmental studies are incorporated into the strategic planning of such development. As this approach is based on current LAP legislation, it is anticipated that the SEA and AA requirements for LAPs will be expanded to include the three new types of plans.

Previous NPO71 has been deleted. Since the publication of the NPF, further enhancements of the core strategy approach have been put in place through legislation and with the publication of the Section 28 Ministerial Guidelines on 'Housing Supply Target Methodology for Development Planning' to support the implementation of the National Planning Framework and the three Regional Spatial and Economic Strategies, to factor in dwelling vacancy and the balance between development in both urban and rural areas. As the action is completed no significant effects from the deletion.

NPO102 is a new NPO relating to the development of new approaches to measuring and monitoring compact growth, which is being aligned with the increasing digitalisation of the planning system. This NPO is therefore broadly positive for PHH and MA, and with indirect positive effects for BFF, LS, CF, AQ and W in the short, medium and longer terms, as better data gathering and digital tools should inform better plan- and decision-making, and ensure the revised growth targets are being met with the intended benefits protecting greenfield from sprawl, providing adequate housing, ensuring services are in place to support the compact growth and the improvements for AQ and CF from achieving more compact communities with less need for road based private car use and emissions with benefits for BFF.

Previous NPO 73a has been deleted as revised Guidelines for Planning Authorities for Development Plans was published in June 2022. No significant effect from this deletion.

NPO103 has a minor wording amendment to include '*Continue to ensure the alignment*', which is broadly indirectly positive for PHH, AQ, CF, W, and MA as it sees continued investment and alignment of strategic infrastructure for transport, electricity, water etc.

Mitigation Proposed:

Assessment and Discussion:

- **NPO96:** National SEA legislation may need to be updated to integrate new Urban Area Plans, Priority Area Plans, and Coordinated Area Plans, if they are to come under S.I. 436 of 2004, as amended. It is noted that town planning remains a category under S.I. 435 of 2004 as amended and would cover these plans in any case.

8.3.11 National Strategic Outcomes

8.3.11.1 National Strategic Outcome 1

Compact Growth

These outcomes remain unchanged; therefore, **no significant effects** are anticipated. Notwithstanding that, the overarching mitigation as per **NPO 1** in Chapter 1 of the draft Plan is recommended.

8.3.11.2 National Strategic Outcome 2

Enhanced Regional Accessibility

Under *Inter Urban Roads* the following NSO has been revised as follows:

- Advancing orbital traffic management solutions, including the Galway Ring Road and ~~M8/N25/N40 Dunkettle Junction upgrade (approved) in Cork~~ **the Cork City Northern Transport Project;**

Under *Public Transport* the following NSO has been revised as follows:

- To strengthen public transport connectivity between cities and large growth towns in Ireland and Northern Ireland with improved services and reliable journey times, **based on the findings of the Draft All-Island Strategic Rail Review.**

New NSO has been added under the sub-heading *Cycling*:

- **Develop a safe and connected cycle network between cities, towns and key tourist destinations to reduce the carbon impact of transport, promote a healthy and inclusive society and promote economic growth.**

Assessment: The proposed revisions under Inter Urban Roads reflect that the previously referenced project is in operation and is therefore replaced with the reference to another transport project that is underway, the Cork City Northern Transport Project. It is noted that this project is progressing through scoping and pre-appraisal, after which it will be subject to an options selection process, and ultimately subject to the statutory processes, including environmental impact assessment, and will also be subject to planning approval.

References to the draft All-Island Strategic Rail Review under Public Transport are indirectly positive for PHH and MA, as rail travel is an important mode for facilitating sustainable travel, and therefore the NSO is recognising that there will be findings arising from the Strategic Rail Review. It is further noted that the draft All-island Strategic Rail Review is itself being subject to an SEA.

The new addition under Cycling relates to development of cycle network across cities, towns and key tourist destinations. This is considered directly and indirectly positive for CF and PHH in the medium to long term as the presence and access to cycleways can contribute towards modal shift, where cycling is chosen over private car travel, and access to active travel options is positive for overall health and wellbeing. However, there is potential for temporary and localised negative impacts to arise for the PHH, W, AQ, CF and MA SEOs during the construction of cycle networks, while permanent negative impacts are likely to occur for BFF, LS, CH and LandS where cycle routes traverse greenfield sites (which can result in a loss of hedgerows and trees, and operationally, where species may be disturbed by passing cycle traffic), undisturbed lands and/or result in alterations to heritage features and/or their setting, as well as potential for effects on landscape and views (e.g. arising from the instruction of new built infrastructure into scenic landscapes).

Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.

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- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.11.3 National Strategic Outcome 3

Strengthened Rural Economies and Communities

Under Rural Development the following NSOs have been revised as follows:

- Implementation of the actions policy measures outlined in Our Rural Future and Our Living Islands policy documents ~~the Action Plan for Rural Development~~;
- Implementation of a targeted ~~the~~ Rural Regeneration and Development Fund to enable opportunities to secure the rejuvenation and re-purposing of rural towns and villages weakened by the structural changes in rural economies and settlement patterns;
- Provide a quality nationwide community-based public transport system in rural Ireland which responds to local needs under the ~~Connecting Ireland Programme Rural Transport Network~~ and similar initiatives;
- Ongoing investment in the agri-food sector to underpin the sustainable growth for the sector as set out in Food Wise 2025 ~~Vision 2030~~.

Assessment: The proposed revisions are minor in nature and reflect updated references in relation to policy instruments, the impacts of which are discussed as a part of the assessment of the relevant NPOs. Therefore, these revisions are considered to be **not significant**. Notwithstanding that, the overarching mitigation as per **NPO 1** in Chapter 1 of the draft Plan is recommended.

8.3.11.4 National Strategic Outcome 4

High-Quality International Connectivity

Under Airports the following NSOs have been revised as follows:

- ~~The development of additional runway and terminal facilities such as the second runway for Dublin Airport for which planning permission has been approved.~~
- The development and enhancement of modern, technologically advanced, cost-efficient infrastructure at out State airports to enhance safety and security, to reduce environmental impact, and to maintain and develop international connectivity;
- Enhancing land-side ~~public transport~~ access, particularly in public transport terms, such as through the MetroLink ~~and BusConnects~~ projects in Dublin;

Under Ports, the following NSOs have been revised as follows:

- ~~Improve~~ ~~Maintain and enhance~~ land transport connections to the major ports including:
- Facilitating the growth of Dublin Port ~~and innovative land use models~~ such Dublin Inland Port through greater efficiency, limited expansion into Dublin Harbour and improved road access, particularly to/from the southern port area;
- Enhancing road connectivity to ~~Rosslare Europort and~~ Shannon-Foynes Port, including local by-passes; and
- ~~Improving~~ ~~Provide motorway access~~ ~~connectivity~~ to Ringaskiddy Port.

Assessment: One of the proposed revisions relate to development and enhancement of modern, technologically advanced, cost-efficient infrastructure at out State airports. Furthermore, the revisions reflect specific references to large-scale transport projects in Dublin and other essential projects that will improve connectivity to important ports. The impacts of these NSOs are discussed as a part of the assessment of the relevant city enablers and NPOs. It is to be noted that the Metrolink and BusConnects are subject to EIA and AA and the outcomes of planning. The M28 Ringaskiddy project was also previously subject to an EIS and AA and the application has been approved by An Bord Pleanála.

Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.

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- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.11.5 National Strategic Outcome 5

Sustainable Mobility

Under *Public Transport*, the following NSOs have been revised as follows:

- Deliver the key public transport objectives of the Transport Strategy for the Greater Dublin Area 2024⁴⁶-2042³⁵ by investing in projects such as **MetroLink, DART+, Luas and BusConnects** in Dublin and **Eastern Region** and key **light rail and bus-based projects identified by the NTA** in the other cities and towns,
- Provide public transport infrastructure and services to meet the needs of **regional growth centres, key towns, large towns and smaller towns, villages and rural areas,**
- Improve connections and walking routes in accordance with the principles of universal design so as to optimise journeys undertaken by foot and enhance pedestrian comfort and safety,**
- Enable more effective traffic management within and around cities and towns through demand management measures including the re-allocation of inner city road-space in favour of bus-based public transport services and walking/cycling facilities;**
- Deliver Transport Orientated Development at scale at suitable brownfield and greenfield locations in cities and metropolitan areas, along high capacity public transport corridors with a focus on land management, institutional and funding arrangements needed to accelerate this type of development.**

Assessment: The proposed revisions/ additions relate to updated references to planned rail and bus projects, improvement in connections and walking routes, enhancements of public transport infrastructure within the cities and towns and the delivery of Transport Orientated Development at scale at suitable brownfield and greenfield locations in cities and metropolitan areas. The impacts of these NSOs are discussed as a part of the assessment of the relevant city enablers and NPOs. It is to be noted that the Metrolink and BusConnects are subject to EIA and AA and the outcomes of planning. The new addition that relates to enabling more effective traffic management within and around cities and towns including the re-allocation of inner city road-space in favour of bus-based public transport services and walking/cycling facilities. These measures are anticipated to have direct and indirect medium- and long-term permanent positive effects in particular for the PHH, AQ, CF and MA SEOs. This would occur through encouraging modal shift and increasing the potential for removal of tailpipe emissions where private vehicle use is discouraged. There are benefits from encouraging the uptake of modal options with the provisions of safe and segregated space for cyclists and pedestrians, where road space reallocation prioritises space for active travel over vehicle use, with subsequent beneficial effects for improved AQ and general health and wellbeing. There may however be some slight negative direct and indirect temporary effects to PHH from implementing this action, arising from localised or wider-scale disruption to transport infrastructure and travel habits/behaviours, and also permanent effects on MA from reallocation of road space, but this is considered to be balanced against the overall permanent benefits over the longer-term.

Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.
- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.11.6 National Strategic Outcome 6

A Strong Economy Supported by Enterprise, Innovation and Skills

Under *Supporting Entrepreneurialism and Building Competitive Clusters*, the following NSOs have been revised as follows:

- Transforming firms in the regions for long-term success through a focus on productivity, innovation and internationalisation and building competitive regional clusters in manufacturing and services, **in**

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~~collaboration with the higher and further education sectors. with an enhanced role for Institutes of Technology in developing 'Technology and Innovations Poles'~~

- Increasing the competitiveness of the business environment in the regions, through the ~~Regional Action Plans for Jobs~~ **Regional Enterprise Plans**, ~~Brexit-specific~~ **tailored** responses for ~~exposed sectors~~ **exposed to external market shocks**, in the regions and regional enterprise competitive funding initiatives through EI and advance property solutions for new investment by IDA Ireland for inward investment and indigenous enterprise **at suitable locations, integrated with planning for housing growth.**
- ~~Further d~~Developing challenge-based Disruptive Technologies initiatives to ensure that we stay at the forefront of technological innovation, market application and commercialisation and can spur the next generation of technology-led enterprises, drawing on R&D activities in the higher education sector and enterprise in the regions.
- Smart Specialisation will encourage the maximising of sectoral strengths through clustering and the scaling of Ireland's existing areas of research excellence.**

Under Digital and Data Innovation, the following NSOs have been revised as follows:

- Enhancing international fibre communications links, including full interconnection ~~between the~~ **with** fibre networks in Northern Ireland ~~and the Republic of Ireland.~~
- Promotion of Ireland as a sustainable international destination for ICT infrastructures ~~such as data centres~~ and associated economic activities.

Assessment: The proposed revisions are minor in nature and relate to minor syntax updates, reference to collaboration for education sector, reflect updated reference to Regional Enterprise Plans, improvements to ICT infrastructure, the impacts of which are discussed as a part of the assessment of the relevant NPOs. Therefore, these revisions are considered to be **not significant**. The new addition relating to Smart Specialisation is considered to have indirect positive impacts across all environmental receptors in the short to long term as it would further enhance the existing research potential of Ireland in different sectors, as the concept aims to focus on a smaller number of regional strengths and priorities where the greatest impacts can be realised.

Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.
- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.11.7 National Strategic Outcome 7

Enhanced Amenities and Heritage

Under Amenities and Heritage, the following NSOs have been revised as follows:

- The Rural and Urban Regeneration and Development Funds ~~will~~ support transformational public realm initiatives to give city and town centre areas back to citizens, encouraging greater city and town centre living, enhanced recreational spaces and attractiveness from a cultural, tourism and promotional perspective.
- The European Regional Development Fund (ERDF) will support projects that promote the conservation and adaptive reuse of our vacant built heritage stock and drive the regeneration of cities and towns through the Town Centre First Heritage Revival (THRIVE) scheme for the period 2021 - 2027.**
- We ~~w~~ill conserve, manage and present our heritage for its intrinsic value and as a support to economic renewal and sustainable employment.

Assessment: The proposed revisions are minor in nature and relates to better phrasing of the NSO. The new addition relates to the funding supports that are provided through European Regional Development Fund (ERDF) for projects that promote the conservation and adaptive reuse of the vacant built heritage stock and drive the regeneration of cities and towns through the Town Centre First Heritage Revival (THRIVE) scheme for the period 2021 - 2027. The impacts related to reuse of vacant built heritage and regenerations of the cities and towns have been discussed as a part of the assessment of the relevant city enablers and NPOs.

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Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.
- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.11.8 National Strategic Outcome 8

Transition to a Low Carbon and Climate Resilient Society

Under Green Energy, the following NSOs have been revised as follows:

- Deliver ~~40~~**80**% of our electricity needs from renewable sources by ~~2020~~**2030** with a strategic aim to increase renewable deployment in line with EU targets and National policy objectives out to 2030 and beyond. It is expected that this increase in renewable deployment will lead to a greater diversity of renewable technologies in the mix.
- **District heating networks will be developed, where technically feasible and cost effective, to assist in meeting renewable heat targets and reduce Ireland's GHG emissions.**

Assessment: The proposed revision reflects the updated national renewable electricity target. The new addition relates to development of district heating networks depending on the technical feasibility and cost-effectiveness. The impacts related to deployment of renewable energy for electricity including that of district heating have been discussed as a part of the assessment of the relevant city enablers and NPOs.

Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.
- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.11.9 National Strategic Outcome 9

Sustainable Management of Water and other Environmental Resources

Under Water, the previous NSOs have been replaced with the following:

- **Substantial State investment, through Uisce Éireann and the Rural Water Programme, to improve compliance with public health and environmental standards, with particular reference to the River Basin Management Plan for Ireland.**
- **Bringing and maintaining public water and wastewater services to acceptable international benchmarks, verified by independent monitoring and reporting.**
- **Achieving improved outcomes in quality in respect of drinking water and in wastewater in relation to rural and private water services.**
- **Adopting forward planning and risk management approaches to minimise the impact of non-compliances with all relevant EU Directives and to safeguard against future compliance risks.**
- **Embedding conservation at the heart of water policy involves prioritising resource management, abstraction control, source protection, tackling leakage and encouraging behavioural change.**
- **The promotion of water conservation and water resource management is to be reflected in strategic investment planning by Uisce Éireann, to include work programmes around leak detection and repair, network improvements, cost effective metering, public awareness campaigns and funding to fix customer side leaks.**
- **Water conservation will inform the Working Group on the review of rural water services, and investment decisions in this area.**
- **Ensuring that public and private water services investment decisions are aligned with the broad strategic aims of the NPF.**

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- Adapting water services to withstand the impact of climate change and of such weather-related events.
- Improving the resilience of rural and private water supplies as part of the review of rural water services currently underway.
- Ensuring the growth of our five cities of Dublin, Cork, Galway, Waterford and Limerick, together with the regional centres identified in the NPF, is supported by the provision of water services investment;
- Devising detailed network and capacity assessments to support the provision of water services infrastructure that facilitates housing and economic development in the priority towns and urban areas identified in the Regional Spatial and Economic Strategies, in order to ensure plan-led development decisions are underpinned by coordinated investment plans and
- Supporting the growth of identified settlements where these are prioritised in development plan core strategies at a county/city level.

Assessment: The proposed additions under Water relate to provision of investment through Uisce Éireann and the Rural Water Programme, improving water and wastewater services, adoption of forward planning and risk management to reduce compliance risks, incorporation of conservation in water policies and investments, review of rural water services, ensuring alignment investment decisions with broad aims of the NPF and improving adaptation and resilience of water supplies and services. Furthermore, some new additions aim to ensure that the growth in the five cities are supported by provision of water services investment, conducting network and capacity assessments to ensure plan-led decisions are underpinned with coordinated investment plans for water services for identified settlements at regional and local levels. These are all considered to be broadly and indirectly positive for W, PHH and MA in the short to long term as improved water and wastewater services can drive progress in the areas of public health, more sustainable use of water resources, and economic development. Understanding capacity needs is a critical issue for W, PHH and MA, as sufficient capacity for wastewater treatment and water supplies are key areas for consideration in planning for increased population growth.

However, as with any infrastructural development, there is a potential for indirect positive and negative impacts on PHH, BFF, LS, W, CH, MA and LandS during the construction phase of a development, related to e.g. increased dust, noise, travel disruptions; disturbance, loss or fragmentation of habitats; loss of soil resource/soil sealing or hydrogeological effects; pollutant or construction debris run-off; alterations to heritage features/setting or landscape and views from new infrastructural elements, unless proper siting and environmental studies are incorporated into the strategic planning of any development

Under Effective Waste Management, the previous NSOs have been revised as per the following:

- enhanced use of civic amenity sites as circular economy hubs; and
- supporting the development of indigenous waste treatment capacity to reduce reliance on export.
- Regional Spatial and Economic Strategies and the core strategies of MASPs and city and county development plans will support national and regional waste policy and the efficient use of resources;
- ~~District heating networks will be developed, where technically feasible and cost effective, to assist in meeting renewable heat targets and reduce Ireland's GHG emissions;~~
- Biological treatment and increased uptake in anaerobic digestion with safe outlets for bio stabilised residual waste.

Assessment: The proposed additions relate to enhancing the use of civic amenity sites (CAS's), supporting the development of indigenous waste treatment capacity and improving biological treatment to increase the uptake in anaerobic digestion. These are aligned with national waste planning and the measures put forward in the National Waste Management Plan for a Circular Economy 2024-2030. The development of additional CAS's or expanded infrastructure at existing sites would improve collection infrastructure for waste and contribute to a decrease in unmanaged wastes including hazardous wastes. This will have positive impacts on BFF, LS, AQ and PHH by ensuring that waste is collected and treated appropriately, which will reduce the risks to soils, water and air quality associated with unregulated disposal activities such as backyard burning and illegal dumping. However indirect negative impacts to AQ and CF include the potential for increased emissions from the transport of waste to and from CAS's. Ireland is not fully self-sufficient in all waste streams and continues to require exports to other Member States, the UK and further afield for final treatment, particularly for hazardous wastes. Improving indigenous capacity would require construction of adequate infrastructure supporting waste collection, disposal and recovery. This is anticipated to result in additional land take and associated negative environmental impacts on PHH, BFF, LS and W. However,

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permanent indirect positive impacts are also anticipated across all environmental receptors as a result of reduction in illegal dumping and litter. Furthermore, reduction in reliance on waste exports will have positive effects for CF and MA in the medium to long term.

Anaerobic digestion (AD) is a proven and efficient technology that delivers multiple energy, climate, environmental, social and economic benefits. AD can assist Ireland in meeting many important energy and non-energy EU and national policy commitments and has wide ranging cross-sectoral benefits e.g., via contributing to the development of the bioeconomy, as well as yielding biogas/biomethane as outputs which can help offset use of natural gas and contribute to GHG emissions reductions. Therefore, improving biological treatment to maximise the circular potential of AD and composting facilities to deliver high quality outputs is overall positive across the SEOs. Enhancing circular potential of AD can therefore play a key role in aiding Ireland to meet its EU and national renewable energy and GHG emissions reductions targets.

The deletion of the NSO on district heating reflects its relocation under NSO 8 under *Green Energy*.

Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.
- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.11.10 National Strategic Outcome 10

Access to Quality Childcare, Education and Health Services

Under *Education*, the following NSOs have been revised:

- Expand and consolidate third-level facilities at locations where this will further strengthen the capacity of those institutions to deliver the talent necessary to drive economic and social development in the regions. ~~The consolidation of the DIT campus at Grangegorman is a critical flagship infrastructural project for the higher education sector;~~
- Investment in higher and further education and training will be a key driver of Ireland's competitiveness. **The NPF is aligned with the National Strategy for Higher Education to 2030, and the Future FET: Transforming Learning The National Further Education and Training (FET) Strategy.** The development of programmes for life-long learning, especially in areas of education and training where skills gaps are identified by employers and the further and higher education and training system, working together through Regional Skills fora, in responding to the skills needs of their regions.

Under *Health- **Healthy Communities and Healthcare Services in the Community***, the following NSOs have been added/revised:

- **A nationally overarching priority for the health of the population is achieving the objectives of Healthy Ireland and the implementation of the successor to the National Physical Activity Plan, to support active mobility and equitable access to physical activity opportunities, and Healthy Cities and Counties programme, delivered through local authorities.**
- **Health and Wellbeing Projects and prevention programmes including the BreastCheck Services and the ongoing fluoridation programme of works.**
- **Expanding Community and Primary Care is at the heart of the Sláintecare vision. The development of Primary Care Centres (PCCs) is an important part of this vision. This will include the appropriate provision of PCCs, and accommodation based on local service and population needs. Expansion of primary care will involve refurbishments of existing buildings and where necessary new builds.**
- **Delivery of the Enhanced Community Care (ECC) Programme which aims to move greater levels of care out of the acute hospital system and deliver care close to peoples' homes, allowing patients to remain at home and in their community for as long as possible.**
- **Continue the transformation of the National Ambulance Service (NAS) from a service that has traditionally transported all patients to hospital for treatment, to a delivery model that is clinically led, where care is provided in the most appropriate place.**

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- ~~Facilitating the transformation of healthcare delivery by investing in ICT infrastructure, to facilitate the flow of information across and within various care settings, and increasing the capacity of primary care, including:~~
 - ~~Provision of primary care centres on a national basis to match population changes including new builds and refurbishments of existing buildings; and~~
 - ~~Expansion of community diagnostics and minor surgery.~~

Under Health- Services for Older People, the following NSOs have been added/revised:

- The Irish Government's strategic goal is to deliver a new model of integrated older persons health and social care services, across the care continuum supporting older people to remain living independently in their own homes and communities for longer in line with the Sláintecare. It is recognised however that care provided in long term residential care settings will continue to be an important part of the continuum of care for older person people into the future.
- Development of community based housing with supports by moving to new models of 'home-first' care for older people and 'Housing with Support' purpose-built, non-institutional, 'own front door' accommodation with support or care services in conjunction with the Department of Housing.
- Continuing the National Age Friendly Programme delivering a range of policy supports with local government including transport, walkable streets and community activities and supporting Age Friendly Towns. Delivery of long-term residential care developments based on local need and located centrally in proximity to the community and local services.
- Development of policy on the design and build for nursing homes, as well as other models of delivery of long-term care for older people to support them to remain living independently in their communities.

Under Health- Integrated Health and Social Care Services, the following NSOs have been added/revised:

- Health infrastructure is not just about property and buildings. It is also about the technologies, digital and data sharing capabilities that are needed to provide integrated care. These capabilities must be planned along-side infrastructure including how to leverage digital and technologies to include virtual and digitally enabled care built on a solid foundation of trust, privacy, and cyber resilience. The Irish health service is underpinned by a vast technology landscape which is the largest ICT operating environment in the State.
- ~~Facilitating the transition of people~~ service users across services, providing multi-disciplinary care at the lowest level of complexity close to where people live. Focus on improving access to primary and community care services, including mental health, disability services, palliative care, services for older people, social inclusion and addiction support.
- Implementing Adult Palliative Care Policy and integrated palliative care with services available in the Regions to all those who need them.

Under Health- Mental Health (A Vision for Change), the following NSOs has been deleted/added:

- ~~Development of the National Forensic Mental Health Services Hospital and a network of Intensive Care Rehabilitation Units.~~
- ~~Enhanced infrastructure for community mental health teams.~~
- Implementing the national Mental Health policy "Sharing the Vision 2020-30" the national suicide reduction policy "Connecting for Life" and the upcoming revision of Mental Health Act. These policies are both in implementation phase and include the delivery of timely and accessible care that reflects a more whole-of-government approach, allied to person-centered and recovery orientated principles.
- Incorporation of the planned extension of Mental Health Commission regulation of community Mental Health services (under the new Mental Health Act) which will require significant built environment enhancement.

Under Health- Acute Hospital Services, the following NSOs have been added/revised:

- ~~Delivering improved acute hospital services through the implementation of strategies and policies such as the National Maternity Strategy and the National Cancer Control Programme, and a wide range of programmes and projects including the following:~~

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- Continued development of services and infrastructure (acute, cancer, trauma, maternity,) which will be informed by strategy and population requirements as outlined in overall approach to health service planning. There has been significant investment in services and capacity, with further investment and expansion of capacity being informed by population and service requirements across the country.
- ~~The national Paediatric model of care and, in particular, construction of the new National Children's Hospital, associated satellite care units and the associated ICT infrastructure required to form Ireland's first digital hospital comprising of the main hospital on the shared campus at St James's and the now completed two Paediatric Outpatient and Urgent Care Centres at CHI Connolly, Blanchardstown, and CHI Tallaght.~~
- Implementation of the new Elective Care Centre Projects and Surgical Hubs, which will provide significant additional capacity and enable the separation of scheduled and unscheduled care.
- ~~Implementation of the National Maternity strategy; this includes co-location of the National Maternity Hospital and other standalone maternity hospitals to acute hospital campuses and development, upgrading and remodelling of maternity services infrastructure;~~
- ~~Building additional capacity designed for maximum effectiveness and targeted at enhancing ambulatory care and elective care, to reflect the scale of population growth and ageing, in line with identified service needs;~~
- ~~Reconfiguration of acute services within hospital groups;~~
- ~~Expansion of the Ambulance fleet and expanded ambulance bases to support prehospital care and timely access to critical services. As part of this, consideration will need to be given to how access to air support can be improved into the future;~~
- ~~Implementation of the National Cancer Control Programme, including development of capital infrastructure for the delivery of cancer services, in particular medical oncology day units, aseptic compounding units, radiation oncology and equipment replacement;~~
- ~~The National Plan for Radiation Oncology (Dublin, Cork and Galway) is essential to delivering on required radiation oncology capacity, with some current facilities nearing the end of their useful life;~~
- ~~Investment in the designated cancer centres, including facilities, would include a goal of developing at least one comprehensive cancer centre as set out in the National Cancer Strategy launched in 2017.~~

Assessment: The proposed revisions for NSOs under *Education* are minor in nature and provide clarity in relation to the alignment between NPF and the National Strategy for Higher Education to 2030 and Future FET. Therefore, these are considered to be **not significant**.

The proposed additions/revisions under the *Health* NSOs relate to development of various services and residential infrastructure, digital services and technologies, provision of investment for services, and implementation of new Elective Care Centre Projects and Surgical Hubs. These are all directly positive for PHH and MA in the short to long term as improved health systems enhance preventive care, early diagnosis, and effective treatment. This will in turn result in better health outcomes, reduced morbidity, and increased life expectancy. However, as with any infrastructural development, there is potential for direct and indirect positive and negative impacts on PHH, BFF, LS, W, CH, MA and LandS during the construction phase of a development, related to e.g. increased dust, noise, travel disruptions; disturbance, loss or fragmentation of habitats; loss of soil resource/soil sealing or hydrogeological effects; pollutant or construction debris run-off; alterations to heritage features/setting or landscape and views from new infrastructural elements unless proper siting and environmental studies are incorporated into the strategic planning of any health facilities.

Mitigation

- Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework.
- Furthermore, development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

8.3.12 Cumulative Effects

The draft Plan continues the strategies of compact growth, city focussed development and balanced regional development. The strategies will have positive cumulative effects **CF** by contributing to Ireland achieving its

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climate targets. This will be done by providing for compact settlements with easy access to facilities and services without the need for long journeys. The compact growth approach also facilitates better integrated transport planning, allowing for public transport options to achieve the scale needed to be viable, be it bus, train or active travel modes. Cumulative negative effects are anticipated in the short to medium term horizon where population growth exceeds capacity in key public transport infrastructure. Projects such as Metro, DART+ and BusConnects will all contribute to cumulative improvements in public transport in Dublin however their lead in time for planning and construction will be matter of several years. This may be further exacerbated by the focus on Transport Orientated Development. The objectives in the NPF have to be seen also in the context of cumulative positive effects in the medium to longer term with the continued role out of actions in CAP and the emerging offshore renewables sector which are being advanced through the new marine planning and legislative framework delivered by the Maritime Area Planning Act 2021.

In Ireland it estimated that there are approximately 1,500 premature deaths per year attributed to air pollution. The main sources of this pollution are PM_{2.5} from solid fuel burning and NO_x from vehicle emissions, particularly in built-up areas. Cumulative positive effects are therefore anticipated for **AQ** through the gradual shift away from reliance on private car toward public transport / active travel, resulting in emissions of reduced NO_x and particulates in the long term. The delivery of greater quantities of renewable energy onto the grid, allowing a move away from solid fuel burning for heat will also have cumulative long term positive effects. As with CF, cumulative negative effects are anticipated for AQ until capacity in key public transport infrastructure matches growth in city areas in particular. In the absence of workable and reliable transport alternatives, people will revert to private car use. The cumulative benefits for AQ are also dependant on the delivery of renewables, as anticipated in the Climate Action Plan. Similar to transport however, the lead in time for planning and construction may not see the cumulative benefit until the medium to long term horizon. The objectives in the NPF have to be seen also in the context of cumulative positive effects in the medium to longer term with the continued role out of actions in CAP and in the policy framework of the national Clean Air Strategy.

Positive cumulative effects are likely for **LS** through the focus on infill and brownfield sites over greenfield development, protecting the wider greenfield resource for other uses including nature, agriculture etc. Positive cumulative effects are also likely where contamination and dereliction on brownfield sites are addressed. However, this may result in larger volumes of contaminated soil and materials for disposal at specialised waste facilities. Capacity within Ireland may not be sufficient thus requiring export to third countries. The focus on brownfield is also not confined to the NPF and other legislation and policy is also looking to such sites to deliver actions and objectives across a broad policy base e.g., nature restoration law 2024, flood management, carbon storage. Cumulatively there may not be the quantity of brownfield and infill to deliver these competing policies and actions.

Positive cumulative effects on BFF are likely as the NPF makes provision for development of an integrated network of green and blue infrastructure within and connecting compact settlements with a focuses on infill and brownfield sites which protects wild areas outside settlement boundaries. This will have positive effects on the ecological network and movement of species assuming adequate consideration is given to identifying *areas of important / supporting habitat for biodiversity with the blue / green infrastructure*. However cumulative negative effects are anticipated for **BFF** as much of the policy base in the NPF will require development lands be it for housing, economy, transport links, services and in this iteration of the NPF there is also a requirement for lands for renewable energy development. Added to this is the demands placed by the CAP which requires land for bio-crops, for forestry and for other types of renewables. Agriculture also places pressure on biodiversity. All of these drivers are leading to cumulative negative effects for BFF through species disturbance, habitat loss, habitat disturbance and fragmentation and pollution, all from these competing activities. Within settlements the cumulative loss of small green spaces and open areas is of particular note where alternatives may be in short supply, driving urban biodiversity into an ever decreasing space. Refurbishment of buildings is also a driver in this regard as older building and heritage assets can provide areas of key habitat in themselves or secondarily through their influence on surrounding landscape character.

Positive cumulative effects are anticipated for **LandS** and **CH** as more derelict areas are rehabilitated, reducing dereliction and improving the quality of the overall settlement envelopes. The strategy for balanced regional development may cumulatively positively affect CH by acting as a driver for people to return or stay locally in rural Ireland, protecting the heritage of smaller towns and settlements. Refurbishment of buildings also has potential for cumulative positive effects by ensuring built heritage is brought back into the living fabric of settlements. Notwithstanding this, the cumulative change to landscape and townscape may significantly affect wider visual experiences.

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Cumulative positive effects for **W** where new development associated with compact growth is on mains, requiring less connections to domestic waste water treatment systems which include risk of pollution to surface and groundwaters if not properly sited or maintained, although acknowledging the management of this has improved in recent years. Notwithstanding the improvements that could be achieved in water quality with greater connection to mains, this can only be achieved where treatment capacity matches growth. Without this alignment, cumulative negative effects are anticipated in the short to medium term. This could be exacerbated in some areas where nutrient enrichment from wastewater adds to other pressures for water dependant ecosystems already under pressure from other discharges and from physical modifications e.g., ports.

Overall, positive cumulative effects are expected in relation to **MA**. NPF promotes the reuse / retrofitting of vacant and derelict properties and encourages new housing development to be directed to brownfield land. This will have a positive effect on the housing market by increasing housing supply, as well as promoting a circular economy where materials are reused and recycled, which reduces the need for new housing to be developed. Furthermore, promoting the reuse of existing buildings in towns and cities will have positive cumulative effects by reducing vacancy rates as city and town centres are revitalized and repopulated.

8.3.13 Transboundary Effects

Throughout the assessment, consideration has been given to potential for transboundary effects with Northern Ireland. The draft Plan itself, recognises in chapter 8 that the island of Ireland is a single ecological entity and as such well-coordinated cross-border approaches are essential for effective planning and investment actions, in addressing climate breakdown and the biodiversity crisis, and protecting the common environmental resources of the island.

Key pathways for impact identified in the assessment include:

- Climate and air quality - the framework of compact growth and city focus put forward in the draft Plan will help to reduce GHG emissions associated with private car use in the medium to long term. Given the geographic scope for climate change, any reductions in GHG emissions will also have positive effects in a transboundary sense. A similar transboundary effect on AQ could also be anticipated in the medium to longer term as populations can avail of multi-modal options. In the shorter term this may be negative where population and integrated transport cannot keep pace.
- Water - transboundary impacts to water quality are possible given the shared marine waters around Ireland's coastline and the presence of international river basin districts sharing surface and ground waters. Delivery of infrastructure in the border counties is a consideration, as is the capacity of services such as wastewater which could negatively impact shared waters and offshore renewables. The River Basin Management Plan and the National Marine Planning Framework seek to manage these effects through coordinated actions and on-going dialogue which is reflected in the draft Plan.
- Biodiversity, flora and fauna - like water, biodiversity is shared across Ireland's boarder as a result of mobile species: birds; bats; and marine mammals. Both the SEA and the NIS have considered the potential for likely significant effects on biodiversity generally and on the Natura 2000 network (Ireland) and the National Site Network (Northern Ireland). The Natura Impact Statement concluded that, if the mitigation outlined in the NIS is taken into account, the NPF would not result in an adverse effect on the integrity of any European Sites, alone or in-combination, and taking into consideration transboundary effects.
- Landscape and visual - landscape and visual effects may be evident near the Northern Ireland border, with the potential to have effects on listed views, Areas of Outstanding Natural Beauty, Regional Seascape Character Areas, and views from and the setting, of cultural heritage assets. This is particularly in relation to onshore and offshore renewable energy infrastructure.

With the application of NPO 1 and the policy base included in Chapter 8 of the draft Plan, particularly NPO 51 which states: In co-operation with relevant Departments in Northern Ireland, ensuring effective management of shared landscapes, heritage, water catchments, habitats, species and trans-boundary issues in relation to environmental policy, transboundary effects identified, none of the effects are expected to be significant in nature.

9 MITIGATION AND MONITORING

9.1 Mitigation Proposals

Chapter 7 and 8 of this Environmental Report have highlighted the potential significant environmental effects of the implementation of the draft Plan and the reasonable alternatives considered. It has also had regard to the assessment work carried out to inform the Appropriate Assessment. In line with Annex I(g) of the SEA Directive, this chapter presents the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan. This has been achieved, in the main by impact reduction strategies to reduce / remove the significant impacts through modification of policies and addition of protective policies to offset negative effects.

The draft Plan has benefitted from iterative discussion and assessment feedback to inform the draft as presented for public consultation. Over the course of this iterative feedback, the plan team have amended the emerging draft to address issues raised through the SEA and AA processes however it is acknowledged that further integration of mitigation will continue during the statutory consultation period as other stakeholder feedback is received.

Proposed mitigations are presented by draft Plan chapter. **Table 9-1** addresses proposed SEA mitigation, **Table 9-2** addresses proposed NIS mitigation and **Table 9-3** addresses the SFRA mitigation.

9.1.1 SEA Mitigation

Table 9-1: SEA Mitigation for Policy Objectives

Draft Plan Policy Section Ref	Proposed Mitigation
Chapter 1 – the Vision	<ul style="list-style-type: none"> NPO 1: The NPO should be expanded to reference Flood Risk Assessment. <i>This mitigation has now been integrated into the final draft NPO.</i> NPO 1: The previous supporting text should be reinstated with minor amendments as it acknowledges the need for other non-statutory assessments to support environmental and ecological reporting. This is particularly important for ecology as Ecological Impact Assessments (EclA) inform statutory assessment such as EIA and NIS and other planning decisions which may not require full EIA. <i>This mitigation has now been partially integrated into the final draft NPO.</i> <p>At the project level, all applications for development consents for projects emanating from any policies that may give rise to likely significant effects on the environment will need to be accompanied by one or more of the following, as relevant:</p> <ul style="list-style-type: none"> Ecological Impact Assessment Report (EclA) (<i>including a biodiversity checklist tool or similar, if deemed relevant and proportionate</i>) ; Environmental Report <i>if deemed relevant and proportionate</i>; Water Framework Directive (WFD) Assessment of projects <i>if deemed relevant and proportionate</i>; Environmental Impact Assessment Report (EIAR) if deemed necessary under the relevant legislation (statutory document); Natura Impact Statement (NIS) if deemed necessary under the relevant legislation (statutory document).
Chapter 2 – A New Way Forward	<ul style="list-style-type: none"> ALL: While respecting the broad principles of the NPF, population growth will initially be targeted and prioritised to locations which have capacity in key services including but not limited to wastewater treatment in order to avoid negative effects on the receiving environment. This prioritisation will allow time for other target areas to address deficiencies and upgrade as necessary. ALL: Support the implementation of the guidance and actions contained in the Reducing Embodied Carbon in Cement and Concrete through Public Procurement in Ireland report from DETE as a NPF policy / supporting text.

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Draft Plan Policy Section Ref	Proposed Mitigation
Chapter 3 – Future Planning and Development, and Place Making Planning Priorities for the three regions	<ul style="list-style-type: none"> • EM4: A strategy to link larger commuter towns with smaller areas would benefit a wider cross section and ensure smaller areas are not left behind as a result of lack of investment. • EM5 and SR8: This priority should be reinstated. • EM7, NW8 and SR5: As per mitigation for NPOs 75 and 76.
Chapter 3 – Future Growth Enablers for Dublin, Galway, Cork, Waterford and Limerick	<ul style="list-style-type: none"> • ALL: The supporting text should state that infrastructure and project proposals are subject to the outcomes of the applicable environmental, planning and consenting processes. • ALL: The enablers should include the need to incorporate carbon sinks and nature restoration proposals into key development areas. Adaptations that build resilience for sea level rise due to climate change risks should also be referenced when targeting development in coastal locations. • G3, L6 and W4: It is noted that similar enablers such as D2 for Dublin and C2 for Cork related to sustainable development in greenfield areas have been revised to include 'brownfield areas'. It is recommended that these enablers is revised to include this reference as prioritising infill development into brownfield sites over greenfield sites can offer positive implications for BFF, LS and W. • G7: The enablers should include the need to incorporate carbon sinks and nature restoration proposals into key development areas. Adaptations that build resilience for sea level rise due to climate change risks should also be referenced when targeting development in coastal locations. • G8: It should be clarified if the GMATS is the same strategy as the Galway Transport Strategy (GTS).
Chapter 4	<ul style="list-style-type: none"> • NPO 16: Proactive planning for recreation and access facilities should be encouraged through all tiers of planning to provide for sustainable communities while also protecting environmental and ecological receptors from harm. • NPO21: The NPO should include specific reference to environmental protection and sustainable development. It should also reference the opportunity for the development of these public lands to support related government commitments and policy on biodiversity, soils and water quality as a priority, in a manner which supports Ireland's progress in achieving the UN Sustainable Development Goals (SDGs) and the 2030 Agenda for Sustainable Development."
Chapter 5	<ul style="list-style-type: none"> • NPO 23: Reference should be included stating successor policies relating to national policy for rural areas and the islands should be screened for SEA and AA. • NPO 26: The policy should reference the need for environmental assessment and supporting text should be updated to reflect the nature of environmental value provided by heritage assets. • NPO31: This objective should be revised to acknowledge the current evidence base and the need for the rural economy to proactively address these issues as part of a long term sustainable solution. • NPO34: Support in this policy must be linked to improvements in water quality parameters associated with agriculture and real reductions in GHG emissions associated with agriculture that go beyond offsetting with forestry. This mitigation has been partially integrated into the final draft NPO in so far as it links to the ensuring progress in achieving targets in the National Climate Action Plan and the River Basin Management Plan. However this falls short of the full intent of the mitigation. • NPO 35: Support for the strategies should be conditional on integration of environmental considerations and outcomes of monitoring of existing facilities. This mitigation has been partially integrated into the final draft NPO however there is no link to monitoring. • NPO 35: This NPO would benefit with updated wording ensuring alignment with the relevant NBAP. This mitigation has been integrated into the final draft NPO. • ALL: As per NPO 1 support for sectoral plans, programmes and strategies should be linked to them being subject on application of SEA / EIA/ FRA / AA as appropriate. • ALL: A new NPO addressing light pollution, especially in areas designated as 'Dark Sky' should be considered.
Chapter 6	<ul style="list-style-type: none"> • ALL: Housing developments of scale seeking planning permission should demonstrate evidence of existing adequate capacity or committed capacity for the cumulative anticipated population of the area in the following key services prior to delivery of the

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Draft Plan Policy Section Ref	Proposed Mitigation
	<p>housing: drinking water, wastewater, early years, primary and secondary school places, health care and elderly care services.</p> <ul style="list-style-type: none"> • ALL: Housing developments of scale seeking planning permission should consider the impact of recreational pressure from the new population (and cumulatively with existing populations using the areas) on local biodiversity and protected habitats and species. Furthermore, a Recreational Access Management Plan shall be prepared to identify necessary mitigation strategies where significant pressures are identified. • NPO42: Recognition should be made within NPO 42 that childcare and school delivery associated with increased housing developments should also explicitly support children and young adults with special educational needs to ensure there is capacity within communities for all residents to access education locally. • NPO 43: Terminology in relation to the number of homes required should be reviewed and standardised for clarity of the plan [50,000 houses or houses to accommodate 50,000 households]. • NPO 43: See also mitigations from Chapter 2. • NPO46: To avoid compact living remaining a short term solution for people, the life cycle needs of all life-stages of residents need to be incorporated into design principles more tangibly particularly those related to amenity provision for teenagers, young adults and older residents. A study into the recreational and social needs of residents in compact forms of development should be coordinated by the DHLGH and lessons learned from recent compact developments of scale nationally (and international examples where relevant) to inform a future guidance note or similar for LA and developers on designing for all life stages. • NPO48: Revised NPO to include further aims to specifically address the speed of response once housing need has been established if long term negative effects are to be avoided.
Chapter 7	<ul style="list-style-type: none"> • NEW NPO: A new NPO should be included to specifically support the alignment of terrestrial planning with marine planning at regional and local level to provide for the sustainable development of port infrastructure that enables the development of ORE. • ALL: Supporting text on Ports and Harbours should include an explicit reference to the Guidance document on the implementation of the Birds and Habitats Directive in estuaries and coastal zones with particular attention to port development and dredging, European Commission (2011). • NPO51 and 52: These NPOs would benefit from a qualification of support being subject to the application of statutory environmental assessments at plan and project level and the outcome of development permission and / or licensing processes. • ALL: The DHLGH and DECC should establish a 'Collaborative Forum' to discuss proposed ORE projects and the enabling infrastructure required to support delivery, notably ports and grid (onshore and offshore elements). The collaborative forum should identify the ports which are suitable for ORE and determine the level of intervention needed to upgrade them in the short to medium term to establish feasibility. • ALL: Masterplans or similar strategies/plans should be prepared for key enabler ports. These Masterplans could guide the planning and development of projects/proposals for expansion of existing port infrastructure, including those which may be within or adjacent to European sites. Examples such as the Dublin Bay Biosphere Biodiversity Conservation and Research Strategy 2022-2026 could be referenced. • NPO55: This policy would benefit with inclusion of better integration of the coastal and marine interface, potentially through Integrated Coastal Zone Management (ICZM), particularly in the context of ORE which has a significant inter-related onshore footprint. • NPO55: A national scale policy for coastal management plans should be supported by a clear guidance framework on responsible bodies and how these should be developed.
Chapter 8	<ul style="list-style-type: none"> • NPO 62: Ongoing consultation and coordination throughout the planning tiers as relevant should be stipulated. • NPO 64: Robust site selection is required for any facilities to be developed.
Chapter 9	<ul style="list-style-type: none"> • NPO 68: A guidance note on reuse of buildings to acknowledge the built and natural heritage potential should be developed by the OPR to alert developers to the potential conflicts and the possible need for an architect and / or ecological survey before works can commence. This mitigation has partially addressed in the final draft NPO 68 however it does not include for a guidance note.

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Draft Plan Policy Section Ref	Proposed Mitigation
	<ul style="list-style-type: none"> – Retrofit plans/works must consider impacts to other environmental receptors with particular attention paid to bats. – Retrofit plans/works shall consider historical setting / landscape character. • NPO 71: The policy wording should be amended as follows: “...<i>achieving a zero-carbon climate neutral economy</i>”. This would reflect the wording of the national climate objective in the 2021 Act, and recognise that there are greenhouse gas emissions other than carbon dioxide which must also be reduced. • NPO 74: The proposed wording shall be amended to state: “<i>Support the co-location of renewable technologies with other supporting technologies and complementary land uses, including agriculture, amenity, forestry and opportunities to enhance biodiversity and promote heritage assets, at appropriate locations in line with EU and national commitments.</i>” • NPO 74: Guidance is required to establish the expected environmental assessment requirements to support applications for renewable electricity projects that fall outside the mandatory requirement for EIA.. • NPO 74: Feasibility studies should be conducted at both Regional Authority and subsequently Local Authority level to assess potential areas located in close proximity to larger industrial parks and brownfield areas. Guidance for co-location should be developed for different community settings in Ireland, the guidance will differ between rural and urban settings. • NPO 74: The NPO should clearly link to the need for robust constraints analysis and site / route sections to underpin decision-making on where and what is appropriate. <i>This mitigation has been partially integrated into the final draft NPO through the inclusion of a reference to locations being determined based upon the best available scientific evidence in line with EU and national legislative frameworks.</i> • NPO 75: All new wind and solar projects of scale shall incorporate a community benefit scheme to ensure that benefit serves the community in a fair and balanced way. • NPO 75: Adoption of the regional targets into the relevant Regional Spatial and Economic Strategy (RSES) will be subject to SEA and AA and any supporting policy base and/or spatial definitions provided in these RSES should be added in full to advise on any further mitigation at regional, local or project level. Similarly, in devising the maximum potential contribution of each local authority within the Region, the Regional Assembly will recognise the existing environmental criteria employed in the geospatial analysis carried out by the SEAI (see Appendix D) and will provide for a similar or enhanced level of environmental protection to that used to develop the targets. With regard to the accelerated permitting procedures required to be implemented by Member States under RED III, and in light of the regional renewable target being put forward, the role for regional-level SEA and AA will therefore be crucial. • NPO 75: The Climate Action Plan sets out an Action to “Publish Regional Renewable Electricity Strategies”. It is unclear if these will be prepared as part of future updates to the RSESs or as standalone strategies. In either case, the Regional Renewable Electricity Strategies will be subject to SEA and AA. • NPO 75 and 76: Adoption of the local targets developed by the Regional Assemblies into the relevant County and City Development Plans will also be subject to SEA and AA and any supporting policy base and/or spatial definitions provided in these. • NPO 75: It is recommended that the DHLGH liaise with DECC and the Regional Assemblies on the preparation of the Regional Renewable Electricity Strategies. This will include development of guidance or similar on the consideration of cumulative effects, particularly given the scale of wind and solar PV development proposed in the CAP and the increased pace required to deliver this. • NPO 75: Areas that are subsequently identified for onshore renewables must be informed by appropriate environmental assessment and consideration of sensitivities in the receiving environment. DHLGH, DECC, and other government stakeholders as relevant shall liaise on the identification process for any go-to/acceleration/designation areas for renewable energy. Discussions shall be informed by, but not limited to, the following: Land Use Review Phase 1 and Phase 2 work, existing Local Authority

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Draft Plan Policy Section Ref	Proposed Mitigation
	<p>Renewable Energy Strategies, the future Regional Renewable Electricity Strategies, and the development of DMAPs.</p> <ul style="list-style-type: none"> • NPO 75: Identification of any areas to be designated for renewable electricity and or renewable energy will be supported by a quality site selection and environmental constraints analysis process that addresses environmental criteria such as landscape, cultural heritage, water quality, flood risks and biodiversity, as a minimum. <i>This mitigation has been partially integrated into the final draft NPO through the inclusion of a reference to locations being determined based upon the best available scientific evidence in line with EU and national legislative frameworks.</i> • NPO 76: It is recommended that the following text is added, as it is presently unclear whether the Regional Renewable Electricity Strategies will be standalone or incorporated as part of the RSEs, and the publication of the latter is a specific action of the Climate Action Plan 2024: <i>“Local Authorities shall plan, through their City/County Development Plans, for the delivery of specified Target Power Capacity (MW) allocations consistent with the relevant Regional Spatial and Economic Strategy and Regional Renewable Electricity Strategy.”</i> • NPO 77: It is recommended that the NPO include a specific reference to “resource” and waste management, as this would be more in keeping with current circular economy best practice • NPO 79 and NPO 80: This objective could be further improved by including a direct reference to the DHLGH Best Practice Interim Guidance Document: <i>Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas.</i> • NPO 79 and NPO 80: These objectives should link to Green and Blue infrastructure provision in NPOs 81, 82 and 90 as additional benefits could be achieved for BFF and W where NbS and SUDs are integrated. • NPO 79: The requirement to use NbS and SUDs as a principle should be strengthened to more than support as per proposed amendments: <i>Proposals for the management of stormwater, rainwater and surface water flood risk should demonstrate the application, to the extent possible, of nature-based solutions and sustainable drainage systems.</i> • NPO 80 : The requirement to use NbS and SUDs as a principle should be strengthened to more than support as per proposed amendments: <i>Proposals for Support the retrofitting of existing environments to cater for surface water run-off through shall demonstrate the use of nature based solutions, including the implementation by Uisce Eireann of Integrated Drainage Plans on a prioritised settlement basis.</i> • NPO 81: Planning for Green Infrastructure benefit further from linking to plans for urban greening. • NPO 82: This objective could be improved further by adding reference to the local level as follows: <i>“Identify and strengthen the value of greenbelts and green and blue spaces at a regional, city and local scale...”</i> <i>This mitigation has been integrated into the final draft NPO.</i> • NPO 85: It is recommended that the go further to commit to developing guidance to support planners and developers in achieving real effect from this NPO. The expertise for such guidance will require collaborative effort between the DHLGH, NPWS and others. • NPO 81, NPO 82 and NPO 90: Green and Blue infrastructure provisions should be enhanced to incorporate biodiversity specific infrastructure provisions also to ensure that this element is proactively protected and planned for in these wider strategies.
Chapter 10	<ul style="list-style-type: none"> • NPO 96: National SEA legislation may need to be updated to integrate new Urban Area Plans, Priority Area Plans, and Coordinated Area Plans, if they are to come under S.I. 436 of 2004, as amended. It is noted that town planning remains a category under S.I. 435 of 2004 as amended and would cover these plans in any case.
NSO	<ul style="list-style-type: none"> • Application of NPO 1 to all plans, projects and activities requiring consent arising from the National Planning Framework. • Furthermore development whose primary objective is to conserve, enhance or restore biodiversity should be supported in principle.

9.1.2 NIS Mitigation

Table 9-2: NIS Mitigation for Policy Objectives

Draft Plan Policy Section Ref	Proposed Mitigation
Chapter 1 – The Vision	<i>None proposed.</i>
Chapter 2 – A New Way Forward: NPO2, NPO3, NPO4, NPO5, NPO6, NPO7, NPO8, NPO9, NPO10 and NPO11	<p>Mitigation of Adverse Effects on Integrity</p> <p>A suite of mitigation is necessary to address the Adverse Effects on Integrity identified from the assessment of NPO2, NPO3, NPO4, NPO5, NPO6, NPO7, NPO8, NPO9, NPO10 and NPO11, inclusive. This includes:</p> <p>Existing Commitment to Environmental Assessment. As provided for under NPO1 any plans or projects arising from the NPF will be subject to their own environmental assessment and consents/approvals consistent with legislative requirements, including the legal requirements of the EU Habitats Directive and in particular the provisions of Article 6(3) and, if necessary, 6(4) of that Directive. The environmental assessments to include, as necessary, Strategic Environmental Assessment and Environmental Impact Assessment (EIA), Appropriate Assessment (AA).</p> <p>Overarching Mitigations. With respect to the Natura 2000 network, it is recognised that there is an important, existing, framework of legislation¹²³, policy¹²⁴ and guidance¹²⁵ applicable to the network at European and national level; a framework therefore relevant to the assessment of the draft revised NPF. That framework is based on the legal provisions of the EU Habitats Directive; and will also need to be expanded upon in due course by the provisions of the recently approved EU Nature Restoration Law. The following mitigation seeks to compliment and support that existing framework through identifying specific mitigation measures required to address the adverse effects on the integrity of European sites arising from the draft revised NPF; as identified by this NIS.</p> <p>In identifying the necessary mitigation measures, cognisance has been given to ensuring that the policies of the draft revised NPF:</p> <p>Do not hinder or prevent achieving or maintaining the favourable conservation status of the Natura 2000 network and its component European sites from being achieved; and</p> <p>Where possible and applicable to a plan such as the NPF, aligns with and compliments actions being taken to achieve favourable conservation status.</p> <p>The European sites which form the Natura 2000 network do not function in isolation. As reflected in Article 10 of the EU Habitats Directive, the landscape features outside of European sites, such as linear features (e.g., river corridors, hedgerows, stone walls) or stepping-stones (e.g., woodland, waterbodies, Annex 1 habitat outside of European sites¹²⁶) has an important function in ensuring the coherence of the Natura 2000 network; particularly with respect to the migration, dispersal and genetic exchange of wild species of community interest. Article 10 requires Member States to endeavour in their land-use planning and development policies to encourage the management of features of the landscape which are of major importance for wild fauna and flora.</p> <p>In light of the above and given, in particular, the draft revised NPF includes policies for significant population and economic growth combined with the significant policies in relation to the delivery of regional renewable electricity capacity allocations for onshore wind and solar, and local Target Power Capacity allocations, there is a significant risk of policies individually and in combination with one another resulting in adverse effects on the integrity of European sites and a knock-on effect on the coherence of the Natura 2000 network. The</p>

¹²³ e.g., EU Habitats Directive, EU Birds Directive, EU Nature Restoration Law

¹²⁴ e.g., EU Biodiversity Strategy, Ireland's 4th Biodiversity Action Plan

¹²⁵ e.g., DHLGH (2022) *Development Plans – Guidelines for Planning Authorities*. Section 9.2.

¹²⁶ e.g., Annex 1 Habitat Mapping - <https://airomaps.geohive.ie/ESM/> (linked to NPWS data source linked to Article 17 reporting)

application of the identified mitigations will address these effects and avoid compounding the declared biodiversity crisis in Ireland.

Given the potential for adverse effects, there is a need through mitigation measures to balance the risk of these effects through setting out at a national level the measures which can guide, control and manage the delivery of those policies, including any plans or projects which emerge from those policies, whilst also ensuring the integrity of European sites and the coherence of the Natura 2000 network. Such measures can then be tiered down, as relevant, to regional and local tiers of development planning.

The mitigation focuses on European sites themselves and, in reflection of Article 10 of the EU Habitats Directive, the linear features and stepping-stones outside of the European sites necessary to the function of the European sites, and their qualifying interests, and ensuring the coherence of the Natura 2000 network.

The overarching mitigation is as follows:

The principles of the mitigation hierarchy – avoid, minimise and mitigate (in that order) – are applied to their fullest extent with respect to plans and projects. This is to ensure that likely significant effects on European sites, their QIs and SCIs are avoided in the first instance and the mitigation hierarchy applied.

Development which is likely to result in the loss, fragmentation or deterioration of habitats which are qualifying interests for European sites should be avoided as a principle of plan making and projects; unless legislation dictates otherwise.

To inform plans or projects emerging from the policies of the revised draft NPF, the corridors¹²⁷ and stepping-stones¹²⁸ outside of European sites necessary to ensure their function and collective coherence will be identified, mapped and described in terms of their relationship to the functionality of European sites and the coherence of the Natura 2000 network. This mitigation can align with or sit within existing or future Green Infrastructure Strategies and/or County Biodiversity Action Plans; which can then be reflected through the planning hierarchy at regional and local level.

Plans and projects emerging from the policies of the revised draft NPF will take account of the mapped corridors and stepping-stones outside of European sites and their function during plan preparation and project consenting.

Linked to the mapping of corridors and stepping-stones, local authorities will identify opportunities to strengthen and enhance mapped corridors and stepping-stones. Again, this mitigation can align with or sit within existing or future Green Infrastructure Strategies and/or County Biodiversity Action Plans; which can then be reflected through the planning hierarchy at regional and local level. It could also align with the response at a regional and local level with respect to the move towards no net loss of biodiversity consistent with NPO85.

Movement towards no net loss for development planning and policy is critical and consistent with the identified actions of the legally mandated 4th Biodiversity Action Plan. In this regard, the Department, in collaboration with relevant Government agencies, will prepare and publish a science-based methodology by which no net loss can be demonstrated for their land use planning remit. The methodology will also address viable options/mechanism to address losses where these are identified at a project level. Such options/mechanisms could include addressing losses strategically through Green Infrastructure Strategies and/or County Biodiversity Action Plans consistent with and complementing the National Restoration Plan to be published by 2026 (in accordance with EU Nature Restoration Law) and consistent with Outcome 2F of the 4th Biodiversity Action Plan.

Policy Specific Mitigations. With respect to the majority of the NPF, the mitigations with respect to the explicit commitment to environmental assessment and the preparation and the publication of Guidance for Biodiversity and Development will be sufficient to mitigate at the national Plan level any adverse effects on the integrity of European sites arising from the

¹²⁷ e.g., watercourse, hedgerows, treelines, stone walls

¹²⁸ e.g., waterbodies, ex-situ foraging/refuge sites, Annex 1 habitats outside of European sites

revised NPF. However, for certain policies, policy specific mitigations are identified; as detailed below.

Development Phasing

While respecting the broad principles of the NPF, population and employment growth will need to initially be targeted at locations which have capacity in key services and functions necessary to enable and support that growth without contributing to existing identified threats and pressures to, and avoid adverse effects on integrity of, European sites. This targeting and prioritisation will allow time for actions to address existing issues to be addressed and to build capacity for growth where necessary; including in the key areas of urban wastewater, urban drainage and access/recreation infrastructure.

Water Supply and Abstraction

Uisce Éireann, as Ireland's national public water services provider, has published for consultation its draft Water Services Strategic Plan 2050 (WSSP 2050); which sets out its objectives and the means by which it aims to achieve them in the context of the significant challenges that are likely to be faced over the next 25 years. The draft Plan was published in May 2024 and consultation will run until July 2024. The WSSP 2050 is informed by a SEA and NIS. The strategic objectives of the WSSP 2050 are:

- Safe and reliable drinking water;
- Protecting and restoring the environment;
- Sustainable services fit for the future; and
- Supporting customers, communities and the economy.

The strategic objectives are underpinned by strategic aims including delivering reliable water supplies, protecting the water environment and contributing to meeting the requirements of the Water Framework Directive. These strategic aims are themselves underpinned by 35 key actions; which includes a commitment to review Uisce Éireann's first National Water Resources Plan (NWRP) which was delivered under the current Water Services Strategic Plan which this draft will replace once approved. Uisce Éireann state that the WSSP 2050 will be reviewed every five years; in part to enable it to adapt to changing circumstances and evolving needs. The draft NIS of the WSSP 2050 concludes that, subject to the mitigation proposed, the implementation of the WSSP 2050 will have no adverse effects on any European sites, either alone or in combination with other plans and projects. WSSP 2050 should be implemented in full once approved and the AA process for it has concluded.

Urban Wastewater¹²⁹

The implementation of the Urban Wastewater Treatment Directive has led to a significant reduction in nutrients and organic material polluting surface waters. However, it is understood that Ireland is still not fully compliant with this Directive; which could also be contributing the existing threats and pressures on European sites as documented in Article 17 reports and also EPA water quality reports. These threats and pressures could be exacerbated further by the predicted population and employment growth identified by the NPF through policies NPO1 to NPO4, inclusive.

Mitigation actions include putting in place or upgrading deficient wastewater treatment infrastructure and getting the best performance from existing systems by improving how they are operated and maintained. Such mitigations require investment and substantial work is needed to improve the Urban Wastewater network in Ireland and it is recognised by the EPA that it will take many years of sustained investment to bring all treatment infrastructure up to standard and also to provide for future needs. The EPA estimates that it will take a multi-billion euro investment and, based on current investment levels, at least two decades to get all treatment systems up to standard. In 2022, the EPA identified 89 priority areas where action is needed to protect the environment and identifies that Uisce Éireann's next capital investment plan (2025 to 2029) has the potential to deliver significant benefits to our environment and that it is critical that this investment is directed to the priority areas. The

¹²⁹ Mitigation identified with reference to: EPA (May 2024) *Impacts of Pressures on Water Quality – Urban Wastewater*. Catchment Science & Management Unit

EPA also notes that additional actions are highlighted in the third River Basin Management Plan to address urban wastewater pressures.

Given that there are existing threats and pressures on European sites from urban wastewater discharges, including in the cities and regions where population and employment growth will be targeted plus the significant potential that the increased predicted population and employment growth to add to these existing pressures, the following mitigation measures are identified linked to the *Development Phasing* mitigation set out above:

The delivery of putting in place or upgrading deficient wastewater treatment infrastructure and getting the best performance from existing systems; with a key focus on the identified priority areas and provision for increasing investment levels commensurate with the delivery. This will assist in addressing existing threats and pressures on European sites; including with respect to where planned population and employment growth will be targeted;

Identify the actions and investment necessary to build capacity into the urban wastewater network commensurate with the predicted, planned and phased population and employment growth to ensure continued conformance with the Urban Wastewater Treatment Directive and to ensure that existing threats and pressures are not exacerbated and to ensure that no new threats and pressures emerge; and

RSEs, as then tiered down into CDPs, will need to ensure that the urban wastewater infrastructure necessary to accommodate the planned and phased population and employment growth is developed in parallel with the delivery of (a) and (b) right through to 2040.

Failure to address existing threats and pressures from urban wastewater discharges and to build capacity for planned future population and employment growth will result in significant risks at the project consenting stage for those projects reliant on that capacity; particularly in relation to ensuring that the Appropriate Assessment process can be satisfactorily concluded.

Urban Drainage

Pollution from urban drainage (e.g., nutrients, sediments, hydrocarbons, historic contamination) is identified as an existing threat and pressure to European sites. Policies should be embedded into RSEs and tiered down to CDP for any development seeking consent to ensure, through its design and operation, that it will not contribute additional threats and pressures from urban drainage pollution and, where possible, address any existing potentially contributing threats and pressures through that development; particularly where historic contamination may be present on previously developed land or where drainage features have been historically culverted (e.g. opportunities for daylighting). The design and operation of development should apply Sustainable Urban Drainage Systems (SuDS) principles and incorporate urban drainage Nature Based Solutions (NbS) with reference to up-to-date guidance

Recreational Infrastructure and Access Management

Development associated with leisure and recreation activities of the population alongside other more diffuse recreational activities e.g., walking, cycling etc. are identified as existing threats and pressures to European sites; including in those cities and regions where the majority of the planned population and employment growth will be targeted. To inform the RSEs, a Regional Access and Recreation Strategy (RARS), with reference to European Sites and their qualifying interests, will need to be prepared to identify the existing recreation infrastructure, identify existing threats, pressures or management issues relating to this infrastructure (including but not exclusively related to European sites) and identify actions and funding necessary to address existing threats, pressures and management issues in addition to ensuring that sufficient formal and informal greenspace (including natural and accessible green space) is planned and delivered to accommodate the recreational and access needs of planned population and employment growth identified within the revised NPF. The RARSs will then need to be tiered down to CDP in terms of action and delivery.

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	<p>In relation to specific mitigation and through their RARS, the RSES for the five Cities will need to take account in particular of the following:</p> <p>Dublin: Recreation and access management issues related to the Wicklow Mountains SAC and SPA and European sites associated with the coastal areas;</p> <p>Cork: Recreation and access management related to Great Island Channel SAC and Cork Harbour SPA</p> <p>Limerick: Recreation and access management issues related to the Lower River Shannon SAC and River Shannon and River Fergus Estuaries SPA; particularly as it relates to the urban pressure impacts and effects of Limerick City and its environs in light of its planned population and economic growth.</p> <p>Galway: Recreation and access management issues; particularly with respect to those European sites within or adjacent to the urban areas of Galway City and its environs in light of its planned population growth and mindful of the identified pressures of those European sites in Galway Bay.</p> <p>Waterford: Recreation and access management issues related to European sites; particularly those identified with respect to Lower River Suite SAC and the European sites at Tramore.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO2, NPO3, NPO4, NPO5, NPO6, NPO7, NPO8, NPO9, NPO10 and NPO11 alone will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
Chapter 3 – Effective Regional Development:	<i>Not Applicable.</i>
Chapter 4 – Making Stronger Urban Places: NPO14, NPO15, NPO16, NPO17, NPO18, NPO19, NPO20 and NPO21	<p>Mitigation of Adverse Effects on Integrity</p> <p>The suite of mitigation identified to address the adverse effects of the policies considered under Chapter 2 are also applicable to addressing the adverse effects on the integrity of European sites identified with respect to NPO14, NPO15, NPO16, NPO17, NPO18, NPO19, NPO20 and NPO21, inclusive. This includes (i) the commitment to environmental assessment, (ii) the overarching mitigations and (iii) the policy specific mitigations.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO14, NPO15, NPO16, NPO17, NPO18, NPO19, NPO20 and NPO21 will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
Chapter 5 – Planning for Diverse Rural Places: NPO24, NPO26, NPO27, NPO28, NPO29, NPO31, NPO33, NPO34 and NPO35	<p>Mitigation of Adverse Effects on Integrity</p> <p>The suite of mitigation identified to address the adverse effects of the policies considered under Chapter 2 are also applicable to addressing the adverse effects on the integrity of European sites identified with respect to NPO24, NPO26, NPO27, NPO28, NPO29, NPO31, NPO33, NPO34 and NPO35, inclusive. This includes (i) the commitment to environmental assessment, (ii) the overarching mitigations, and (iii) the policy specific mitigations. Additional policy specific mitigations are included to address certain policies of Chapter 5 where mitigations (i) to (iii), inclusive, are not considered sufficient to mitigate for adverse effects.</p> <p><u>Additional Policy Specific Mitigation for Chapter 5</u></p> <p><i>Agri-food Industry</i></p> <p>The following policy-specific mitigation measures are identified to address the potential adverse effects which will arise through the support provided by Policy NPO34:</p> <p>Any agriculture-based development seeking planning consent which includes, results in or supports activities that will result in any increase in point-source or diffuse pollution in sub-catchments within or upstream of any European site(s) that support habitats or species which are in unfavourable conservation status due to agricultural threats or pressures, or within sub-catchments identified “at risk” due to water quality threats and pressures relating to agriculture or other source¹³⁰, should be avoided. If avoidance is not possible then any development consent should provide a science-based justification as to why the development</p>

¹³⁰ [EPA Maps](#) – Significant Pressures Datasets

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	<p>should be permitted alongside any mitigation or compensation necessary to address adverse effects consistent with Article 6(3) and 6(4) of the EU Habitats Directive.</p> <p>Any agriculture development seeking consent for development which includes, will result in or supports activities that can result in point-source or diffuse pollution will be required to demonstrate that it will not either alone or in combination with other projects result in any new or increased point-source or diffuse pollution of surface or groundwater; particularly if those surface or groundwater systems can influence the current or future conservation status of any European sites.</p> <p>Any agriculture development seeking consent for development which will result or support activities that can result in nitrogen air pollution will be required to demonstrate that it will not either alone or in combination with other projects result in any new or increased nitrogen air pollution; particularly if that pollution will adversely affect sensitive habitats or species, including those within European sites.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO24, NPO26, NPO27, NPO28, NPO29, NPO31, NPO33, NPO34 and NPO35 alone will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
<p>Chapter 6 – People, Homes, and Community: NPO42, NPO43, NPO44, NPO46 and NPO48</p>	<p>Mitigation of Adverse Effects on Integrity</p> <p>The suite of mitigation identified to address the adverse effects of the policies considered under Chapter 2 are also applicable to addressing the adverse effects on the integrity of European sites identified with respect to NPO42, NPO43, NPO44, NPO46 and NPO48, inclusive. This includes (i) the commitment to environmental assessment, (ii) the overarching mitigations and (iii) the policy specific mitigations.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO42, NPO43, NPO44, NPO46 and NPO48 alone will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
<p>Chapter 7 – Realising our Island and Marine Potential: NPO50, NPO52, NPO54, NPO55, NPO56</p>	<p>Mitigation of Adverse Effects on Integrity</p> <p>The suite of mitigation identified to address the adverse effects of the policies considered under Chapter 2 are also applicable to addressing the adverse effects on the integrity of European sites identified with respect to NPO50, NPO52, NPO54, NPO55 and NPO56, inclusive. This includes (i) the commitment to environmental assessment, (ii) the overarching mitigation and (iii) the policy specific mitigations. In addition to (iii), additional policy specific mitigations are identified for Chapter 7 and specifically policies NPO54 and NPO56, as detailed below.</p> <p><u>Policy Specific Mitigation for Chapter 7 Policies</u></p> <p>Policy NPO54 is currently unclear in relation to whether European sites are considered to be “vulnerable areas” with respect to the effects of sea level change and coastal flooding and erosion, and whether adaptation responses to be included within national policy include responses to address the effects identified; particularly with respect to coastal European sites. In terms of mitigation, coastal European sites will need to be identified as “vulnerable areas” alongside other social and economic assets and this policy will need to make that clear. This would then enable adaptation responses to be included within national policy to provide the framework to addressing these effects and could also be addressed within the Coastal Management Plans identified in Policy NPO55. Such adaptations will need include measures to address the effects of coastal squeeze on European sites and identify actions for managed retreat where necessary to address this coastal squeeze.</p> <p>Policy NPO56 provides support to the development of Ireland’s offshore renewable energy potential with particular reference to grid connectivity and port infrastructure. In terms of this support, it will need to be linked to the policy and plan making framework through which this support will be delivered and through which specific projects will emerge. The framework reference will be the terrestrially focussed RSEs, and Development plans and the marine focussed National Marine Planning Framework and Designated Marine Area Plans; alongside</p>

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	<p>the interactions between these plans. This will enable a cohesive and robust framework for delivering this support; which includes the requirement for consideration of any plans or projects supported by this policy to be subject to the requirements of Article 6(3) and, where necessary, 6(4) of the EU Habitats Directive.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO50, NPO52, NPO54, NPO55 and NPO56 alone will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
Chapter 8 – Working With Our Neighbours: NPO58, NPO59, NPO61, NPO62, NPO63, NPO64 and NPO66	<p>Mitigation of Adverse Effects on Integrity</p> <p>The suite of mitigation identified to address the adverse effects of the policies considered under Chapter 2 are also applicable to addressing the adverse effects on the integrity of European sites identified with respect to NPO58, NPO59, NPO61, NPO62, NPO63, NPO64 and NPO66, inclusive. This includes (i) the commitment to environmental assessment, (ii) the overarching mitigations and (iii) the policy specific mitigations.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO58, NPO59, NPO61, NPO62, NPO63, NPO64 and NPO66 alone will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
Chapter 9 – Climate Transition and Our Environment: NPO69, NPO70, NPO71, NPO72, NPO73, NPO74, NPO75, NPO77, NPO78, NPO80, NPO85, NPO89, NPO90 and NPO91	<p>Mitigation of Adverse Effects on Integrity</p> <p>The suite of mitigation identified to address the adverse effects of the policies considered under Chapter 2 are also applicable to addressing the adverse effects on the integrity of European sites identified with respect to NPO69, NPO70, NPO71, NPO72, NPO73, NPO74, NPO75, NPO77, NPO78, NPO80, NPO85, NPO89, NPO90 and NPO91, inclusive. This includes (i) the commitment to environmental assessment, (ii) the overarching mitigations and (iii) the policy specific mitigations.</p> <p>With respect to Policy NPO85, the following mitigation will be implemented to address the uncertainty identified and to ensure that no adverse effects on European sites will result through this policy:</p> <p><u>No Net Loss of Biodiversity Guidance</u></p> <p>Movement towards no net loss for development planning and policy is critical and consistent with the identified actions of the legally mandated 4th Biodiversity Action Plan. In this regard, the Department, in collaboration with relevant Government agencies, will prepare and publish a science-based methodology by which no net loss can be demonstrated for their remit land use planning. The methodology will also address viable options/mechanism to address losses where these are identified at a project level. Such options/mechanisms could include addressing losses strategically through Green Infrastructure Strategies and/or County Biodiversity Action Plans consistent with and complementing the National Restoration Plan to be published by 2026 (in accordance with EU Nature Restoration Law) and consistent with Outcome 2F of the 4th Biodiversity Action Plan.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO69, NPO70, NPO71, NPO72, NPO73, NPO74, NPO75, NPO77, NPO78, NPO80, NPO85, NPO89, NPO90 and NPO91 alone will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
Chapter 10 – Implementing the National Planning Framework: NPO92, NPO93, NPO94 and NPO96	<p>Mitigation of Adverse Effects on Integrity</p> <p>The suite of mitigation identified to address the adverse effects of the policies considered under Chapter 2 are also applicable to addressing the adverse effects on the integrity of European sites identified with respect to NPO92, NPO93, NPO94 and NPO96, inclusive. This includes (i) the commitment to environmental assessment, (ii) the overarching mitigations, and (iii) the policy specific mitigations.</p> <p>Subject to the application of the above mitigation, it is concluded that policies NPO92, NPO93, NPO94 and NPO96 alone will not result in an adverse effect on the integrity of any European site or their designated QIs or SCIs, with reference to their Conservation Objectives.</p>
National Strategic Outcomes	<p>The suite of mitigation measures identified to address the adverse effects of the policies considered under Chapter 2 to 10 are also applicable to addressing the adverse effects on the integrity of European Sites identified with respect to NSO 1, NSO 2, NSO 3, NSO 4, NSO 5, NSO 6, NSO 7, NSO 8, NSO 9, and NSO 10. This includes (i) the existing commitment to</p>

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environmental assessment, (ii) overarching mitigations, and (iii) the policy-specific mitigations.

Subject to the application of the above mitigation, it is concluded that neither NSO 1, NSO 2, NSO 3, NSO 4, NSO 5, NSO 6, NSO 7, NSO 8, NSO 9, and NSO 10 alone, will not result in an adverse effect on the integrity of any European Site(s) or their designated QIs or SCIs, with reference to their Conservation Objectives.

9.1.3 SFRA Mitigation

Table 9-3: SFRA Mitigation for Policy Objectives

Draft Plan Policy Ref.	Proposed Mitigation/Recommendation
Overarching Mitigation	<p>All developments should be managed sustainably in order to manage flood risks. NPO 78 shall ensure implementation of the Guidelines to ensure that development follows the sequential approach to avoid non appropriate development in flood prone areas.</p> <p>NPOs 78, 79 and 80 shall also ensure that all developments should include SuDS and nature based solutions to ensure runoff is controlled to at least the greenfield runoff rate. These policies shall also ensure that any impacts on flood risks as a result of climate change are also taken into account.</p> <p>Climate change impact on sea level rise and coastal flooding risks need to be considered in the flood protection measures design.</p> <p>NPOs 78, 79 and 80 will ensure the Guidelines be implemented and the potential climate change impacts on flood risk be taken into account in any proposed developments. This will reduce existing flood risks to any developments and their adjacent lands and properties. Consideration should be given to implement the above-mentioned policies on a catchment wide scale rather than on a localised site specific scale.</p>
NPO 1	Policy NPO 1 would benefit from the inclusion of reference to SFRA as one of the environmental assessments.
Policy enablers for Galway	The Galway City Flood Relief Scheme is currently at Stage I (Scheme Development & Design) and is programmed to be completed the construction works by December 2031. This scheme will provide protection to a significant number of flood affected properties located within the scheme area, both from the fluvial and coastal flood risks. Water compatible type developments/infrastructures should be considered in the areas from where flood risks cannot be eliminated completely.
Policy enablers for Cork	<p>Further to this, climate change impact on sea level rise and coastal flooding risks also needs to be considered in the flood protection measures design. Water compatible developments should be implemented at the high flood risk areas, particularly at the City Docks area.</p> <p>Construction works for the Lower Lee FRS is expected to commence in mid-2027. Further to this, the Middleton Flood Relief Scheme (Cork City Suburb area) has also been progressed and the construction works for this scheme are expected to be commenced in mid-2026. These schemes will provide protection to a significant number of flood-affected properties, both from the fluvial and coastal flood risks, located within the scheme areas. The updated post scheme flood maps should be used in the County Development Plan SFRAs.</p>
Policy enablers for Limerick	The Limerick City and Environs Flood Relief Schemes commenced in April 2021 and is currently at the preliminary design stage. The construction works of this scheme is programmed to be completed by December 2032. These schemes will provide protection to a significant number of flood-affected properties, both from the fluvial and coastal flood risks located within the scheme area.
Policy enablers for Waterford	Following the completion of the Waterford Flood Relief Scheme, the risk of flooding has been considerably reduced and developments in the city adjacent to river has significant potential.
NPO 49-56	<p>All developments in flood zone should have regard to latest national climate policies including Climate Action Plans for 2023 and 2024, second National Adaptation Framework and Flood Risk Management - Climate Change Sectoral Adaptation Plan (2019 - 2024).</p> <p>Supporting the development of coastal management plans to address the likely effects of sea level changes and coastal flooding and erosion and to support the implementation of adaptation responses in vulnerable areas will reduce the flood and erosion risks at the coastal properties (NPO 55).</p>

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Draft Plan Policy Ref.	Proposed Mitigation/Recommendation
NPO 57-66	The cross-border co-operation shall ensure that flood risk on shared catchments (e.g. River Shannon catchment) is reduced and managed. It should also be ensured that all developments on shared catchments are appropriate and follow the principles of the Guidelines and the Northern Ireland Department of Environment Planning Policy Statement, PPS 15 'Planning and Flood Risk'.

9.2 Monitoring Proposals

Article 10 of the [SEA Directive](#) requires that monitoring be carried out in order to identify, at an early stage, any unforeseen adverse effects due to implementation of a Plan or Programme, and to be able to take remedial action. Monitoring is carried out by reporting on a set of indicators, which enable positive and negative impacts on the environment to be considered.

Monitoring is focussed on aspects of the environment that are likely to be significantly impacted by the implementation of the first revision to the NPF. Where possible, indicators have been suggested based on the availability of the necessary information and the degree to which the data would allow the target to be linked directly with the implementation of the first revision to the NPF.

9.2.1 Responsibility for Monitoring

Coordination of monitoring of the NPF is the responsibility of the Department of Housing, Local Government and Heritage as the competent authority for the NPF. It is acknowledged that, as a whole of government plan, other Government departments and agencies also gather and host relevant information which is required for NPF monitoring purposes. These other sources will be reviewed in reporting on monitoring outcomes.

9.2.2 Guidance on Monitoring

The following guidance on approach and best practice for monitoring has been taken into account in developing the proposed monitoring programme for the first revision to the NPF:

- Guidance on Strategic Environmental Assessment (SEA) Statements and Monitoring (2023), EPA, Johnstown Castle, Ireland. Available online: <https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/guidance-on-sea-statements-and-monitoring.php> (accessed 05 October 2023).
- EC (European Commission), 2003. Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment. Available at: https://ec.europa.eu/environment/archives/eia/pdf/030923_sea_guidance.pdf (accessed 05 October 2023).

9.2.3 Summary of Monitoring from Cycle 1 of the NPF 2018-2023

In 2023 the DHLGH undertook a review of the monitoring for the first cycle of the NPF. The review revealed that a number of the indicators could be improved in scope for the second cycle of the NPF to reflect the more mature stage of the plan implementation and the changes in policy which have taken place at EU and national level in the intervening years between 2018 and 2023 e.g. climate law and associated targets. Also since the first monitoring programme was proposed in 2018, the EPA has published guidance on monitoring in SEA which has been used to inform the monitoring proposals for the second cycle. Furthermore, since 2018 a number of new and useful data sources has developed as a part of emerging international, EU and national policies including for key topic areas such as climate, land cover and marine planning. The review recommended that 10 of the 14 indicators from the original programme be amended for the next cycle of the plan. The proposed programme is outlined in **Table 9-4**. This is intended to be a programme for consultation and comments on the proposals are encouraged and welcomed as part of the SEA process. Over the course of consultation it is anticipated that refinement of the monitoring programme will include additions and deletions to Table 9-4 based on feedback relating to practicality of gathering data or suggestions of other more relevant or more freely available data from other sources.

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Table 9-4: Draft Proposed Monitoring Programme for the First Revision to the NPF (2024-2030)

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
Population and Human Health	Population growth aligns with NPF targets.	Target: To increase population in existing cities and towns since Census 2022 in line with NPF targets: - Deliver at least 40% of new homes nationally within the built-up footprint of existing settlements on brownfield or infill lands. - Deliver at least 50% of all new homes in the five cities of Dublin, Cork, Galway, Limerick and Waterford within their existing built-up footprints on brownfield or infill lands. - Deliver at least 30% of all new homes that are targeted in settlements other than the five Cities and their suburbs, within their existing built-up footprints on brownfield or infill lands.	Threshold: Population targets not keeping pace with the targeted pattern of growth to 2040 set out in the NPF.	To monitor rate of growth as per expert group report.	Census data.	Census - every five years with next due 2027	Central Statistics Office
Population and Human Health	Achievement of objectives, targets and indicators outline in Healthy Ireland Implementation Plan 2023-2027	Target: To demonstrate an improvement in the health and wellbeing of people living in Ireland.	Threshold: Healthy Ireland Survey shows a decrease/no increase in the health and wellbeing of people living in Ireland.	Monitoring Report suggested linking the health indicator to a single source of monitoring such as the census. However, Healthy Ireland report is annual and covers a range of specific health topics relevant to NPF.	Healthy Ireland Survey	Annual	Healthy Ireland and Department of Health
Population and Human Health	Proportion of one-off housing in rural areas	Target: Number of one-off houses developed since Census 2022 aligns with NPF targets to deliver at least 40% of new homes nationally within the built-up footprint of existing settlements.	Threshold: Number of one-off houses developed since Census 2022 does not align with NPF targets.	Monitor rate of growth as per Expert Group Monitoring Report	Census of Ireland	Census - every five years with next due 2027	Central Statistics Office

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SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
Population and Human Health	Access to green and blue space in relation to health	Target: Increasing percentage of the population with access to green and blue spaces	Threshold : Decreasing percentage of the population with access to green and blue spaces	Alignment with HSE policy & EU Biodiversity Strategy	Census data. Eurostat and European Environment Agency	Census - every five years with next due 2027; EEA data every 6 years next due 2024	Central Statistics Office
Biodiversity, Flora & Fauna	National total number and condition of European Sites that are reported as impacted as a result of conversion of land uses to housing or construction or modification in existing settlements.	Target (with regard to the Article 17 'F' Pressure/Threat Category Code): - Decreased total number of impacted European sites. - Increasing trend in the condition of European sites.	Threshold (with regard to the Article 17 'F' Pressure/Threat Category Code): - Additional European sites reported as impacted. - Deterioration in the condition of European sites currently impacted	Article 17 monitoring recommended by EPA Monitoring Guidance. One of the indicators on the Regional Development Monitor NPF Monitoring Report recommended including an indicator to clarify how the land use plans ensure the implementation of the required targets in relation to the conservation of European sites and protected species. This will be tied back to relevant threat/pressure codes in Article 17.	NPWS - Status of EU Protected Habitats and Species in Ireland Reports under Article 12 (Birds Directive) & Article 17 (Habitats Directive)	Six yearly reporting, next due 2025	NPWS
Biodiversity, Flora & Fauna	Maintenance of connectivity of European Sites	Target: Maintain and restore connectivity of European Sites	Threshold: Connectivity of European Sites is not maintained or restored	SEA Monitoring Report recommended including an indicator to clarify how the land use plans ensure the implementation of the required targets in relation to the conservation of European sites.	National Land Cover Map NPWS Status of EU Protected Habitats and Species in Ireland Report	National Land Cover Map - every five years with next due 2028 NPWS - Six yearly reporting, next due 2025	National Mapping Division of Tailte Éireann in partnership with the EPA NPWS
Biodiversity, Flora & Fauna	Area of green and blue infrastructure nationally (square metres).	Target: To increase in the overall provision of GBI	Threshold: Decrease in the overall provision of GBI	Amendment of original Indicator to move towards monitoring implementation rather than inclusion in	CORINE Project Urban Atlas Land Cover/ Land Use	CORINE Project - every six years with next due 2024	European Commission CORINE Land Cover dataset

SEA Environmental Report

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
				plans. This could also be used as a proxy under PHH in terms of access to green/blue spaces.	National Land Cover Map	Urban Atlas Land Cover/Land Use - every six years with next due 2024 National Land Cover Map - every five years with next due 2028	Copernicus Land Monitoring Services National Mapping Division of Tailte Éireann in partnership with the EPA
Soil	Proportion of population growth occurring on infill and brownfield lands compared to greenfield nationally	Target: To achieve NPF target of at least 40% of all new homes nationally to be built within the built-up footprint of existing settlements on brownfield or infill lands.	Threshold: Proportion of new homes constructed in the built-up footprint of existing settlements on brownfield or infill lands below the NPF target of 40%.	NPF Monitoring Report recommended a new indicator that monitors whether brownfield sites are being developed in preference to greenfield in order to indicate if compact growth targets were being achieved.	CORINE Project Urban Atlas Land Cover/ Land Use National Land Cover Map	CORINE Project - every six years with next due 2024 Urban Atlas Land Cover/Land Use - every six years with next due 2024 National Land Cover Map - every five years with next due 2028	European Commission CORINE Land Cover dataset Copernicus Land Monitoring Services National Mapping Division of Tailte Éireann in partnership with the EPA
Soil	The area of soil that is sealed or artificialised in square km on a national basis	Target: To limit the rate of increase land that is sealed or artificialised per year and promote the reversal of this in suitable areas e.g., flood zones, high density areas.	Threshold: Trends showing an increase rather than decrease or no change for land that is sealed or artificialised per year	Previous NPF Soil target related to maintaining built surface cover nationally to below the EU average of 4%. The updated monitoring refers more to soil sealing and artificialisation.	CORINE Project Urban Atlas Land Cover/ Land Use National Land Cover Map	CORINE Project - every six years with next due 2024 Urban Atlas Land Cover/Land Use - every six years with next due 2024 National Land Cover Map - every five years	European Commission CORINE Land Cover dataset Copernicus Land Monitoring Services National Mapping Division of Tailte Éireann in partnership with the EPA

SEA Environmental Report

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
						with next due 2028	
Water	Level of phosphorus in water bodies	Target: Decrease in the percentage of water bodies impacted by elevated phosphorus levels	Threshold: Increase in the percentage of water bodies impacted by elevated phosphorus levels	Water Quality Monitoring is recommended in EPA SEA Monitoring Guidance. Limited to phosphorus as more appropriate to wastewater pollution (nitrogen pollution is mostly associated with agriculture). One of the indicators on the Regional Development Monitor (Ecological Status of Water Body, WFD 2016-2021)	Water Quality in Ireland reports	Annual	Environmental Protection Agency Water Monitoring Programme for the Water Framework Directive.
Water	Objectives of WFD are met	Target: Objectives of WFD are met for all waterbodies in accordance with the latest River Basin Management Plan and POM.	Threshold: Waterbodies failing to achieve objectives as set out in the RBMP.	Water Quality Monitoring is recommended in EPA SEA Monitoring Guidance. One of the indicators on the Regional Development Monitor (Ecological Status of Water Body, WFD 2016-2021)	Water Quality in Ireland reports	Annual	Environmental Protection Agency Water Monitoring Programme for the Water Framework Directive.
Water	Indicators for descriptors as reported for the MSFD are achieved or maintained.	Target: Indicators for descriptors as reported for the MSFD are achieved or maintained	Threshold: Indicators for descriptors as reported for the MSFD are deteriorating	Included based on previous NPF monitoring. NPF Monitoring Report recommended that it is taken forward.	Ireland's Marine Strategy Framework Directive (MSFD) Monitoring Programmes	Six yearly reporting	DECC
Water	Number of public water supplies on the EPAs Remedial Action List on a national basis	Target: Decrease in the population affected by the public water supplies on the Remedial Action List	Threshold: Increase in the population affected by the public water supplies on the Remedial Action List	Monitoring drinking water quality is recommended in EPA SEA Monitoring Guidance.	Remedial Action List	Twice a year	EPA and River Basin Districts www.catchments.ie https://wfd .

SEA Environmental Report

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
							edenireland.ie /
Water	Urban Waste Water compliance rate	Target: Increasing compliance rate for all urban waste water.	Threshold: The proportion of urban waste water that meets all requirements of the UWWTD (collection, biological treatment, biological treatment with nitrogen and/or phosphorus removal) in compliant urban areas of the UWWTD ('compliance rate') as a percentage nationally, and the change from the national baseline rate from 2018 of 44%.	SEA stakeholder feedback and Art 12 & 17 feedback	European Commission, WISE Freshwater, 2021.	TBC	European Commission WISE
Water	Boil notice and water restrictions	Target: Increasing compliance rate for all urban waste water.	Threshold: The proportion of urban wastewater that meets all requirements of the UWWTD (collection, biological treatment, biological treatment with nitrogen and/or phosphorus removal) in compliant urban areas of the UWWTD ('compliance rate') as a percentage nationally, and the change from the national baseline rate from 2018 of 44%.	Monitoring drinking water quality is recommended in EPA SEA Monitoring Guidance. One of the indicators on the Regional Development Monitor	Annual Reports on Drinking Water Quality in Public and Private Water Supplies	Annual	EPA

SEA Environmental Report

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
Air Quality	National emission values for PM2.5 and NOx in the Residential, commercial and institutional sector	Target: To reduce adverse air pollution impacts of development in the residential, commercial and institutional sector on health and the economy with a view to reaching WHO Air Quality Guideline emissions values in the future.	Threshold: Trends showing an increase in the emission values for NOx and PM2.5 in the residential, commercial and institutional sector	Air quality monitoring recommended by the EPA Guidance for all national-level plans. The pollutants chosen to align with relevant sectors as well as those listed as key issues under the Clean Air Strategy Monitoring recommended in NPF Monitoring Report.	EPA Air Quality in Ireland Report Real time at EPA National Air Quality monitoring stations	Annual	EPA
Climate/ Climatic Factors	National emission values for greenhouse gases (GHGs) in the residential and commercial, energy and transport sectors	Target: A net annual decrease in GHG emissions for relevant sectors	Threshold: A net annual increase in GHG emissions for relevant sector	GHG Emissions monitoring is recommended in EPA SEA Guidance. One of the indicators on the Regional Development Monitor	EPA Annual National GHG Emissions Inventory reporting EEA National GHG Inventory	Annual	EPA EEA
Climate/ Climatic Factors	Commuting travel patterns according to Census data.	Target: Increase in proportion of people (as a percentage) commuting using sustainable and active travel since Census 2022.	Threshold: Increase in proportion of people (as a percentage) using private vehicles rather than sustainable and active travel since Census 2022.	One of the indicators on the Regional Development Monitor (Mode of Travel to Work/Education (Census 2016))	Census	Every five years with next due 2027	Central Statistics Office
Climate/ Climatic Factors	Commuting travel patterns within MASPs according to Census data.	Target: Increase in proportion of people (as a percentage) living within MASPs commuting using sustainable and active travel since Census 2022.	Threshold: Increase in proportion of people (as a percentage) living within MASPs using private vehicles instead of sustainable and active travel since Census 2022.	Focusing the commuting data on the areas with higher levels of public transport	Census	Every five years with next due 2027	Central Statistics Office
Climate/ Climatic Factors	National roll-out of renewable energy generation	Target: Achievement of new renewable energy generation targets in line with national	Threshold: % shortfall in new renewable energy generation targets against	Alignment with the CAP	TBD	TBD	SEAI

SEA Environmental Report

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
		commitments under the relevant Climate Action Plan.	national commitments under the relevant Climate Action Plan				
Material Assets	Proportion of new development which reuses existing brownfield sites compared to development of greenfield sites by way of percentage and area in square kilometres of developments nationally.	Target: to promote circular economy by reuse of land and buildings. At least 40% of new housing to be built within infill and brownfield lands and encourages reuse of existing building stock.	Threshold: Less than 40% of new housing built within infill and brownfield lands.	NPF Monitoring Report recommended indicator that monitors whether brownfield sites are being developed in preference to greenfield in order to indicate if compact growth targets were being achieved.	CORINE Project Urban Atlas Land Cover/ Land Use National Land Cover Map	CORINE Project - every six years with next due 2024 Urban Atlas Land Cover/Land Use - every six years with next due 2024 National Land Cover Map - every five years with next due 2028	European Commission CORINE Land Cover dataset Copernicus Land Monitoring Services National Mapping Division of Tailte Éireann in partnership with the EPA
Material Assets	Proportion of vacant and derelict buildings/ properties within settlements.	Target: Reduction in number of vacant and derelict properties within settlements.	Threshold: No change or increase in number of vacant and derelict properties within settlements.	Alignment with Town Centre First and CAP	Census GeoDirectory Vacant Property Refurbishment Grant: Croí Cónaithe Towns Fund. Sustainability Energy Authority of Ireland grant schemes	Census - every five years with next due 2027 Grant - ongoing SEAI - annual	Sustainability Energy Authority of Ireland Central Statistics Office DHLGH
Material Assets	Wastewater treatment plants operating at and/or above capacity.	Target: Decreasing area impacted by wastewater treatment plants acting at and/or above capacity nationally.	Threshold: Increasing area impacted by wastewater treatment plants acting at and/or above capacity nationally.	Alignment with Town Centre First and CAP	Uisce Éireann DHLGH	Annual	DHLGH Uisce Eireann
Material Assets	Progress on implementation of the National	Target: To improve connectivity in a manner which supports regional development	Threshold: Completion and distribution of regional exchanges.	Carried forward based on recommendations in the NPF Monitoring Review .	DECC	Annual	DECC

SEA Environmental Report

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
	Broadband Ireland Plan		Percentage of households/premises/schools/businesses connected on a regional basis.	One of the indicators on the Regional Development Monitor.			
Material Assets	Number of Urban Waste Water Priority Areas	Target: Decrease in Urban Waste Water Priority Areas	Threshold: Increase in Urban Waste Water Priority Areas	Alignment with EPA recommendations.	Urban Waste Water Treatment Reports	Annual	Environmental Protection Agency
Material Assets	Standard of private wastewater treatment	Target: Targets within the EPA's National Inspection Plan are met	Threshold: Targets within the EPA's National Inspection Plan are not met	SEA stakeholder feedback	Census	Every five years with next due 2027	Central Statistics Office
Cultural Heritage	Vacant and derelict built heritage buildings	Target: Reduction in number of vacant and derelict properties with built heritage value e.g., on the NIAH or county RPS lists	Threshold: Increase in number of vacant and derelict properties with built heritage value.	To protect the built heritage asset.	Local Authorities	CDP cycle	DHLGH Local Authorities
Cultural Heritage	Integration of risk and vulnerability assessments for climate-change impacts on heritage in implementation of the NPF.	Target: To have an updated hazard and risk assessment map for each county and ensure availability of evidence to inform planning policies nationally and regionally.	Threshold: Percentage of heritage sites assessed as vulnerable overall on a county and regional basis as per Goal 1 of the Built & Archaeological Heritage Climate Change Sectoral Adaptation Plan Number of high-value and/or high risk sites assessed on a county and regional basis as per as per Goal 1 of the Built & Archaeological Heritage Climate	Alignment with the SAP	Built & Archaeological Heritage Climate Change Sectoral Adaptation Plan (2019)	TBC	DHLGH

SEA Environmental Report

SEA Topic	Indicator	Target	Threshold for Remediation	Rationale	Data Source	Frequency	Monitored by
			Change Sectoral Adaptation Plan				
Landscape	Landscape Character Assessments (LCAs) completed nationally	Target: Completion of national Landscape Character Assessment (LCA)	Threshold: LCA not completed.	Alignment with National Landscape Strategy	DHLGH	Annual progress	DHLGH
Landscape	National breakdown of land cover categories as a proportion (%) of the total area of each category (using the NUTS3 classification)	Target: To achieve greater national balance in distribution of land use categories as per the National Land Use Review to maintain ecosystem services.	Threshold: Percentage of specified land use categories (including infrastructure land) on a national basis over time.	Recommendation of the third synthesis report from the EPA of the National Land Use Review	National Land Cover Map, CORINE mapping and EUROSTAT - use Figure 1.3 and Table 1.1 of Synthesis Report for baseline	As per Land Cover Map, EEA and EUROSTAT (see Synthesis Report) https://www.epa.ie/publications/research/evidence-synthesis-reports/Evidence-Synthesis-Report-3.pdf	DECC, EPA and Tailte Eireann

10 NEXT STEPS

There is still some important work to be done before the draft first revision to the NPF can be adopted. The next step in the SEA and plan-making process will be a stakeholder consultation period. During this time, comment on the draft first revision to the NPF, the Environmental Report and the Natura Impact Statement may be submitted for consideration. **Table 10-1** outlines the remaining steps in this process.

Table 10-1: Remaining Steps in the Draft Plan, SEA and AA Processes

Draft Plan Milestones	SEA and AA Milestones
-	Submission of NIS to the Environmental Assessment Unit (EAU) of the DHLGH
Publication of draft first revision to the NPF for statutory public consultation	Publication of Environmental Report and Natura Impact Statement for statutory public consultation ¹³¹ .
End of statutory consultation	End of statutory consultation
Review of submissions and amendments to draft Plan	Review of submissions and assessment of proposed amendments
Finalisation of the first revision to the NPF	Preparation of SEA Statement and finalisation of NIS
	AA Determination by the EAU
Adoption of the first revision to the NPF	-
Publication of first revision to the NPF	Publication of SEA Statement, final NIS and AA determination

Written submissions or observations on the draft First Revision to the National Planning Framework and associated environmental documents can now be made. Details of the consultation timelines and links to documentation are available on www.gov.ie.

What will happen with your response?

Responses will inform the finalisation of the draft Plan.

Freedom of Information

All submissions and comments submitted to DHLGH for this purpose are subject to release under the Freedom of Information (FOI) Act 2014 and the European Communities (Access to Information on the Environment) Regulations 2007- 2018. Submissions are also subject to Data Protection legislation.

Personal, confidential or commercially sensitive information should not be included in your submission, and it will be presumed that all information contained in your submission is releasable under the Freedom of Information Act 2014.

A copy of the Department's Privacy Notices is available at <https://www.gov.ie/en/collection/be6db-data-protection-privacy-notices/>

¹³¹ The EAU of the DHLGH will manage a separate but parallel independent consultation in relation to the NIS for the draft first revision to the NPF, as part of their statutory remit under the Birds and Natural Habitats Regulations 2011, as amended.

Appendix A

SEA Guidance and Circulars Used In Preparation

European Guidance

- Environmental assessment of certain plans and programmes – Directive 2001/42/EC ('SEA' Directive) rulings of the Court of Justice of the European Union. European Commission, 2022.
- Study to support the REFIT evaluation of Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (SEA Directive): draft final report. EC (European Commission), 2019.
- Study concerning the preparation of the report on the application and effectiveness of the SEA Directive (Directive 2001/42/EC) – Final study. European Commission, McNeill, A., McGuinn, J., Hernandez, G. et al., 2016.
- Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment. EC (European Commission), 2013.
- Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment. EC (European Commission), 2003.

National Guidance

- Guidance on Strategic Environmental Assessment (SEA) Statements and Monitoring. Environmental Protection Agency, 2023.
- Strategic Environmental Assessment: Guidelines for Regional Assemblies and Planning Authorities. Department of Housing, Local Government and Heritage, 2022.
- Strategic Environmental Assessment (SEA) Pack. Environmental Protection Agency, 2022.
- SEA Spatial Information Sources Inventory. Environmental Protection Agency, 2022.
- Good Practice Guidance on Cumulative Effects Assessment in SEA. Environmental Protection Agency, 2020.
- Second Review of Strategic Environmental Effectiveness in Ireland. González, A., Therivel, R., Gaughran, A. and Bullock, C., for Environmental Protection Agency, 2020.
- Integrating Climatic Factors into Strategic Environmental Assessment in Ireland – A Guidance Note. Environmental Protection Agency, 2019.
- GISEA Manual – Improving the Evidence Base in SEA. Environmental Protection Agency, 2017.
- SEA Scoping Guidance Document. Environmental Protection Agency, 2015.
- Developing and Assessing Alternatives in Strategic Environmental Assessment – Good Practice Guidance. Environmental Protection Agency, 2015.
- Review of Effectiveness of SEA in Ireland – Key Findings and Recommendations. Environmental Protection Agency, 2012.
- Integrated Biodiversity Impact Assessment – Streamlining AA, SEA and EIA Processes: Practitioner's Manual. Environmental Protection Agency Strive Programme 2007-2013, Strive Report Series No. 106

Department Circulars

In addition, a number of Government circulars have been issued in relation to SEA which will have relevance for the environmental assessment of the draft first revision to the NPF and are being taken into account during the course of the SEA. These circulars comprise:

- PSSP 6/2011: 'Further Transposition of the EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA)'; and
- Circular PL 9 of 2013: 'Article 8 (Decision Making) of EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA) as amended'.

Appendix B

Summary of Scoping Responses and how they Have Been Addressed

Table 1: Written Scoping Submission – Statutory Consultees

Consultee	Summary of Issues Raised	How this was addressed...
Environmental Protection Agency (EPA)	<p>Comments for the draft first revision of NPF</p> <ul style="list-style-type: none"> The revised NPF should clearly set out the implementation arrangements and governance structures, including lines of responsibility for implementation and delivery as well as provisions for revised NPF and progress reporting including environmental reporting. The revised NPF should also set out the scope, remit and implementation related elements of the revised NPF. The relationship between the National Development Plan, the National Planning Framework and the Regional Spatial and Economic Strategies should be clarified. Implications of the Plan in the context of existing Local Authority Plans should also be clarified (e.g., will these be required to be reviewed and updated?). The revised NPF should document the synergies between it and other key national plans. It should be aligned with relevant actions of Climate Action Plan 2023/24 and objectives and commitments of RBMP 2023-2028. The revised NPF should integrate all recommendations from the SEA and AA processes, including mitigation measures and monitoring proposals. It should include a separate section on 'Monitoring, Implementation and Reporting' in the revised NPF, setting out the provisions for monitoring and reporting on the implementation of the plan. It would be useful to consider some of the strategic foresight reports and research projects that have been published at a European level to inform the development of the revised NPF such as FORENV, INHERIT. The revised NPF should include a commitment to implement SEA related environmental monitoring requirements and the associated reporting. Suggest including a separate section on 'Monitoring, Implementation and Reporting' in the revised NPF, setting out the provisions for monitoring and reporting on the implementation of the revised NPF. There may be merits in aligning the periodic reviews of the revised NPF with existing cyclical reporting e.g., Ireland's Environment, Water Framework Directive, National Roads Strategy 2040, etc. Table 1 of <i>EPA guidance on SEA Statements and Monitoring (EPA, 2020)</i>, provides high-level monitoring indicators that may be useful to consider. <u>Data & Knowledge Gaps</u>: The revised NPF should identify any significant data and knowledge gaps, including commitments to address these on a priority basis and where relevant, in association with other government departments/ organisations, during the implementation phase of the revised NPF. This is with a view to strengthening the evidence base for future reviews and iterations of the NPF. The OPR is currently funding a research project – The InPlace Project: Investigation Planning, Place-making and Commuting. The final report is expected in Q4 2024 and will include findings relating to commuting and how planning approaches may be failing from perspectives of health, housing, environment, community development, transportation and planning. 	<ul style="list-style-type: none"> Noted. The draft revised NPF would be sent to the statutory environmental authorities by EUIPR unit of DHLGH, inviting written submissions in line with the regulation. Revised NPOs 34 and 78 have taken RBMP into consideration. Nature Restoration Law has been taken into consideration in the revised NPO83.

Consultee	Summary of Issues Raised	How this was addressed...
	<ul style="list-style-type: none"> The SEA regulations require that the draft revised NPF is sent to the statutory environmental authorities inviting written submissions. DHLGH is required to publish a newspaper notice inviting submissions/observations from the public on both the revised NPF and the SEA environmental report. These should be considered in finalising the revised NPF. The revised NPF should prioritise measures to give effect to the 3rd cycle River Basin Management Plan (once finalised) and the requirements of the WFD, Water Environment (Abstractions and associated impoundments) Act, recast of the Urban Wastewater Treatment Directive and the DHLGH Water Quality and Water Services Infrastructure – Climate Change Sectoral Adaptation Plan. The transposition of the upcoming recast of the Urban Wastewater Treatment Directive should also be prioritised to support the implementation of the Plan. The Plan could set out the legislative changes needed to improve alignment of consent processes with respect to projects requiring environmental impact assessments. For example, legislative changes are required to the EU (Wastewater Discharge Regulations), 2007, as amended, with respect to environmental impact assessment provisions. The Plan should also consider the implications of needing to implement the forthcoming Nature Restoration Law, as well as the actions in the next Biodiversity Action Plan expected to be published in early 2024. While prioritising locations for the renewable energy deployment, it will be important to consider the potential for cumulative impacts within the given areas such as those on landscape/visual amenity, tourism/recreation. The potential for impact on landscape and landscape features in the context of Northern Ireland should also be considered. Given that adjoining local authorities may characterise their landscapes differently, the challenge will be to ensure the coordinated and systematic protection of important or sensitive landscape character areas. It is unclear from the Issues Paper how the delivery of compact growth and the promotion of sustainable development will contribute towards meeting 'avoid/shift' Climate Action Plan targets for sustainable transport. <u>Noise:</u> <ul style="list-style-type: none"> Objective 65 of the NPF 2018: still a gap regarding the provision of the noise planning guidance. It would be beneficial if the delivery mechanisms for the national noise planning guidelines could be called out in more detail in the revised NPF (i.e., what, when, how, by who, etc.). The revised NPF should include an objective to ensure the requirement to increase accessibility to non-car-based transport is integrated into relevant plans and programmes, with a view to increasing active transport, reducing transport related noise and ensuring a reduction in carbon emissions. The revised NPF should promote a progressive move towards adopting the WHO guideline values for environmental noise. 	

Consultee	Summary of Issues Raised	How this was addressed...
	<ul style="list-style-type: none"> • Landscape Characterisation Assessment: <ul style="list-style-type: none"> – The revised NPF should include a national policy objective in support of the preparation of a Landscape Character Assessment Map. • Habitat Mapping: <ul style="list-style-type: none"> – The revised NPF should reflect the recommendation of the Land Use Evidence Review – Synthesis Report to develop a national map of eco system extent and condition compatible of the principles of ecosystem accounting and that could support land-use decision making. • National Policy Objectives (NPOs): <ul style="list-style-type: none"> – The NPOs relating to offshore renewable energy development (NPO 42) and integrating climate action into the planning system (NPO 54) are crucial in terms of calculating Ireland's emissions projections and inventories. These NPOs should be strengthened and be clearly linked to targets contained in the Climate Action Plans. 	
	<p>Comments for both draft first revision of NPF and SEA</p> <ul style="list-style-type: none"> • SEA ER and the revised NPF should include a chapter outlining how the recommendations and mitigation measures from the SEA have been incorporated into the revised NPF. Both should include summary tables outlining the key findings of the SEA and linking the significant environmental effects identified to the proposed mitigation measures, monitoring programme and, where relevant, revised NPF policies/measures. • The integration of the SEA process into the revised NPF should reflect the overall objective of the SEA Directive “to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes”. • Where it is envisaged that measures proposed in the revised NPF will be implemented via other plans, which themselves have been or will be subject to SEA, this should be explained in the Environmental Report and taken into account in the assessment. • Where specific measures will be implemented directly, further detail should be provided in the ER and Revised NPF on the relevant environmental assessments to be carried out at the project stage and relevant mitigation measures to be applied, as appropriate. • The SEA regulations refer to a public consultation period of not less than 4 weeks, however, given that the Plan is a key national policy, consideration should be given to undertaking a more appropriate consultation period in the order of 8-10 weeks. • Under the SEA regulations, all the SEA statutory consultees should be consulted. • Both the SEA and Plan development teams should be cognisant of the recommendations of the Report of the Inter-Departmental Group on National Coastal Change Management Strategy. • Transboundary consultation should be undertaken with environmental authorities in Northern Ireland for identified likely significant transboundary effects. In this regard, the relevant requirements of the SEA protocol under the ESPOO Convention should be considered, for any possible transboundary consultations with non-EU Member States. 	<ul style="list-style-type: none"> • Noted. <p>How were these addressed in the SEA:</p> <ul style="list-style-type: none"> • The SEA Statement will outline how the recommendations and mitigation measures from the SEA were incorporated into the revised NPF. The SEA will set out a draft SEA monitoring programme which will be updated post-consultation on the draft Plan and environmental reports. Thereafter it will be the responsibility of DHLGH to take forward the SEA monitoring programme and to report on its implementation. • Appropriate consideration has been given to the overall objective of the SEA Directive throughout the development of the first revision of NPF and the associated SEA process. • SEA assessment in Chapter 8 of the SEA ER specifies if any measure will be implemented via other plans. It also recommends that competent authorities apply the relevant environment assessment processes to plan, programmes and projects. • Public consultation will be carried out on the draft first revision to the NPF and associated SEA ER and Natura Impact Statement (NIS). • As part of the statutory notification process for the public consultation on the draft Revised NPF and environmental reports, the relevant environmental authorities as stated will be notified.

Consultee	Summary of Issues Raised	How this was addressed...
	<ul style="list-style-type: none"> The same indicators should be used for the plan-related and SEA-related monitoring aspects where possible. SEA Statement should be published by DHLGH alongside the adopted Revised NPF summarising: <ul style="list-style-type: none"> how environmental considerations have been integrated into the Revised NPF; how the environmental report and consultation comments on it have been taken into account; the reasons for choosing the Revised NPF as adopted, in the light of the other reasonable alternatives dealt with (in the Environmental Report and the associated consultation); and the measures decided concerning monitoring. Recommended to include schematics in the revised NPF (and SEA ER), showing the links and key inter-relationships with other key relevant national, regional, sectoral and environmental plans/programmes. Discussion of alternatives should consider the following: <ul style="list-style-type: none"> Useful to indicate whether the alternatives to be considered for the revised NPF are similar to those considered under the NPF 2018 and if not, how they differ, and can they help to inform the consideration of alternatives for the revised NPF. Useful to indicate where environmental baseline and knowledge have improved to inform further refinement of alternatives, e.g., better evidence in relation to pressures such as on biodiversity and hydromorphology. Alternatives should take account of any monitoring, including plan implementation monitoring, available that can inform the future direction of the plan and how the Plan will be developed on foot of the monitoring results. Monitoring <ul style="list-style-type: none"> UK's Outcome Indicator Framework for the 25 Year Environment Plan presents 66 indicators that give a comprehensive view of the environment and how it is changing. These indicators can be considered for the SEA and plan related monitoring for the First Revision of the National Planning Framework. Chapters of the SOER2020, include relevant issues, challenges and recommendations, that should also be considered, in preparing the revised NPF and SEA. These include Chap 2 Climate, Chapter 5 – Land and Soil, Chapter 6 – Nature, Chap 7 Water, Chapter 13 – The Environment and Agriculture and Chap 14 – Environment, Health and Wellbeing. 	<ul style="list-style-type: none"> Transboundary consultation took place with DAERA as appropriate during this SEA process. The SEA will set out a draft SEA monitoring programme which will be updated post-consultation on the draft Plan and environmental reports. Thereafter it will be the responsibility of DHLGH to take forward the SEA monitoring programme and to report on its implementation. The UK's Outcome Indicator Framework will be reviewed for similar relevant indicators in Ireland. Noted. The SEA Statement published alongside the adopted Revised NPF will include summarised information as suggested. Any schematic of plan interlinkages to be included in the draft Revised NPF will also be included in Chapter 4 of the SEA. The alternatives developed following alternative workshop with the Plan Team and their assessment is provided in Chapter 7 of the SEA ER. The key findings of the suggested chapters of the SOER 2020 (as well as relevant and more recent baseline information) were considered as a part of the baseline under Chapter 5 of this SEA ER.
	<p>Comments for the SEA</p> <ul style="list-style-type: none"> The SEA should acknowledge the complex and cross cutting nature of climate and biodiversity issues and includes targets and measures, where relevant and appropriate, that can tackle Ireland's climate crisis and biodiversity emergency as part of an integrated approach to tackling environmental problems. The submission contains a list of possible additional relevant legislations and plans and programmes that should be considered, as relevant and where appropriate in the SEA. Potential Impacts for Consideration: <ul style="list-style-type: none"> Noise: In addition to noise maps, noise action plans should be referred to in the SEA. 	<ul style="list-style-type: none"> Recommended guidance, data sources and tools have been utilised during the preparation of Chapter 5 of this SEA ER and to inform the assessments as appropriate. The suggested impacts are considered as part of the development of Chapter 5 of this SEA ER and to inform the assessments. Suggestions on the draft SEO Objectives have been taken on board and the objectives

Consultee	Summary of Issues Raised	How this was addressed...
	<ul style="list-style-type: none"> – Flood Risk Management: The need to integrate coastal change and coastal flood risk management into land use planning should be addressed. The interlinkages between climatic factors, water, landscape and material assets should consider the risks associated with inappropriate development in at-risk coastal locations. – The SEA Environmental Report should refer to the full range of effects and of the area likely to be affected. This assessment should consider the duration and frequency of effects as well as short, medium and long-term, cumulative and synergistic effects of the Plan. – Air and Climate: Greenhouse gas emission Inventories and Air Pollutant Reports should be considered in the SEA. 	<p>amended as relevant in Chapter 6 of this ER.</p> <ul style="list-style-type: none"> • A summary of alternative scenarios considered were addressed and the justification for selection of the preferred scenario/combination of scenarios is provided in Chapter 7 of the SEA ER. • An interrelationship matrix is provided in Section 5.3.11 of this SEA ER. • Chapter 8 of this SEA ER and supporting appendices will include an assessment of the Revised NPF's policies, which considers potential for various effects such as cumulative, direct and indirect. • Indicators and targets are included as relevant as part of the ER. • Recommended guidance, data sources and tools have been utilised during the preparation of Chapter 5 of this SEA ER and to inform the assessments as appropriate. • Positive, negative, and cumulative effects that are likely to occur are considered under Chapter 8 of this SEA ER along with monitoring and provisions for reporting. • Proposed mitigation measures as required will be listed under Section 9.1 of this SEA ER and monitoring regimes as relevant will be provided in Section 9.2 of this SEA ER. • Suggested plans have been reviewed and considered as part of the development of Chapter 9 of this SEA ER and to inform the assessments. • Recommended guidance, data sources and tools have been utilised during the preparation of Chapter 5 of this SEA ER and to inform the assessments as appropriate.
	<ul style="list-style-type: none"> • SEA Objectives: <ul style="list-style-type: none"> – Objective 1 relating to Population and Human Health should include reference to blue and green spaces for populations and biodiversity. The objective related to wastewater capacity should be amended to include reference to ensuring that there is sufficient drinking water capacity also. – Objective 4 relating to water should include reference to meeting the Water Framework Directive objectives, and delivery of this through the implementation of the right measure in the right place. The references to water bodies should be revised to read "inland, transitional and marine waters, as well as groundwaters". – SEA Objective for Noise should be considered in line with two main scenarios- bringing noise to people and bringing people to noise. • SEA Alternatives: <ul style="list-style-type: none"> – A summary of alternative scenarios considered and the justification for selection of the preferred scenario/combination of scenarios should be provided. The reasons for selecting the preferred alternatives should include a description of how the assessment was undertaken. • Approach to SEA Assessment: <ul style="list-style-type: none"> – There may be merit in including a matrix along with relevant explanatory text in the SEA ER to show the interrelationships between the various topics. – SEA assessment should consider the duration and frequency of effects as well as short, medium and long-term, cumulative and synergistic effects of the revised NPF. • Monitoring, Implementation & Reporting: <ul style="list-style-type: none"> – The SEA environmental report should include a description of the measures envisaged concerning monitoring. – Consider high level indicators monitoring indicators proposed in Table 1 of the EPA guidance on SEA Statements and Monitoring (EPA, 2020) along with the National Agricultural Inspection Programme, National Fertiliser Database and compliance with EPA licences for the intensive agriculture sector. – SEA monitoring should address positive, negative and cumulative effects as relevant and should include provision for on-going review to facilitate an early response to any arising environmental issues. 	

Consultee	Summary of Issues Raised	How this was addressed...
	<ul style="list-style-type: none"> SEA ER should specify the monitoring frequency and responsibilities and include provisions for reporting on the monitoring. Establishing an Environmental Working Subgroup could be considered for oversight on this. The existing arrangements for the implementation stages of plans such as the Grid 25 Implementation Plan, Offshore Renewable Energy Development Plan (ORED), and Food Vision 2030 may be considered, as appropriate. EPA's SEA Resources and Guidance should be utilised for the ER. 	
Department of Environment, Climate and Communications (DECC)	<p>Comments for the SEA</p> <ul style="list-style-type: none"> The analysis of climatic factors in the SEA process should incorporate the latest quantitative data and analysis against which any proposed policy changes / amendments can be assessed, in order to ensure that the revision to the NPF appropriately supports the State's climate ambition and statutory objectives. Additional reports suggested in the submission should be taken into account for SEA. SEA should include reference to both Directive (EU) 2023/2413 (the latest recast Renewable Energy Directive) and Council Regulation (EU) 2022/2577. The SEA process can address the specific requirements of Article 4(4) of Birds Directive (2009/147/EC), outside of designated protection areas. 	<ul style="list-style-type: none"> Chapter 8 of this SEA ER and supporting appendices will include an assessment of the Revised NPF's policies, which considers potential for various effects such as cumulative, direct and indirect. Suggested reports have been reviewed and considered as part of the development of Chapter 5 of this SEA ER and to inform the assessments. References to the latest recast Renewable Energy Directive) and Council Regulation (EU) 2022/2577 have been included as a part of developing Chapter 4 and its supporting appendix E. Where the remit of the NIS is for European Sites, the SEA is considering wider environmental issues.
Department of Housing, Local government and Heritage	<p>Comments for draft first revision of NPF</p> <ul style="list-style-type: none"> Revised NPF should incorporate obligations in relation to Habitats Directive into their plans and programmes, and associated assessments, as required and relevant. Revised NPF should integrate biodiversity into the framework as an underlying objective in the so that it can be effectively integrated into subsequent levels in the planning hierarchy in line with the requirement of the Wildlife (Amendment) Act 2023. Relevant EU and national policies should be referred to and addressed in the drafting of any proposed Revisions. Revised NPF should reflect the updated and new objectives in the Framework to ensure their implementation at lower levels in the planning hierarchy such as County Development Plans and through individual consents for developments. Any proposed revisions to the NPF are tested for their compatibility with all aspects of the future Nature Restoration Law and where possible promotes objectives to facilitate its implementation. <p>Comments for the SEA</p> <ul style="list-style-type: none"> SEA ER should include the provided information from Article 17 report from 2019 as baseline data. It should also ensure that any policies and objectives of the revised NPF do not exacerbate the pressures identified in these reports and preferably propose mitigation measures to address these negative effects. 	<ul style="list-style-type: none"> Noted. Nature Restoration Law has been taken into consideration in the revised NPO83. Article 17 reports were reviewed and considered during the preparation of the environmental baseline as relevant, see Chapter 5.

Consultee	Summary of Issues Raised	How this was addressed...
Department of Agriculture, Food and the Marine (DAFM)	Comments for both draft first revision of NPF <ul style="list-style-type: none"> Engagement should be sought with the fishing and aquaculture industries and other relevant seafood stakeholders at an early stage to help avoid, minimise, and mitigate impacts, as set out under the Maritime Area Planning Act and the National Marine Planning Framework. The principles in the National Marine Planning Framework (NMPF) of avoiding, minimising, or mitigating impacts on access to existing activities should be followed and any proposed development activity should incorporate the principle of maximising coexistence with established activities in marine areas. 	<ul style="list-style-type: none"> Noted.
	Comments for both draft first revision of NPF and SEA <ul style="list-style-type: none"> The evaluation of potential impacts of the National Planning Framework on any such seafood sector activities needs to be given consideration as part of any planning/proposal process and during the development of the process itself. 	<ul style="list-style-type: none"> Potential impacts on seafood sector activities have been considered in Section 5.3.4 of Chapter 5.
Marine Institute, MI (part of DAFM)	Comments for draft first revision of NPF <ul style="list-style-type: none"> NPF should address the importance of integration between land and marine planning and the many shared aims and overlapping areas. Revised NPF should consider the role of MARA in marine management process, responsibility of Local Authorities for developments within 3nm of High Water Mark and the interaction with the OREDPII in light of the impact on seas and coastal communities. 	<ul style="list-style-type: none"> Noted.
	Comments for both draft first revision of NPF and SEA <ul style="list-style-type: none"> Recommend considering marine policies and legislative development for Revised NPF and SEA process. Marine data relating to biodiversity, water quality and climatic factors that can be used to inform the NPF implementation and SEA. It would be useful to link SEA/NPF indicators to existing legislative obligations (MSP, MSFD, Climate Change, Common Fisheries Policy, Natura or WFD). The SEA monitoring of the NPF could be developed to link with the monitoring for NMPF that is currently being prepared by MPPL (DHLGH) and MI. 	<ul style="list-style-type: none"> Relevant marine plans and legislations have been considered as a part of developing Chapter 4 and its supporting appendix E. Marine data have been utilised or referenced during the preparation of the environmental baseline as relevant, see Chapter 5. Suggestions related to SEA and NPF monitoring plans have been as part of the development of the draft proposed SEA Monitoring Programme in Chapter 9.
	Comments for SEA <ul style="list-style-type: none"> Marine data sources are provided in the submission that can be used to inform the SEA. 	<ul style="list-style-type: none"> Suggested data sources have been utilised or referenced during the preparation of the environmental baseline as relevant, see Chapter 5.
Bord Iascaigh Mhara, BIM (part of DAFM)	Comments for draft first revision of NPF <ul style="list-style-type: none"> Spatial planning can enable increased production of aquaculture sustainably such that habitat, water quality, and other marine resources are not compromised, and that Ireland's inshore fisheries (small-scale coastal fisheries) produce high quality, high-value seafood products and are a vital component of the local economies of their coastal communities. Consideration of fisheries and aquaculture sectors must be factored into any objectives relating to the coastal zone. 	<ul style="list-style-type: none"> Noted.

Consultee	Summary of Issues Raised	How this was addressed...
	<p>Comments for SEA</p> <ul style="list-style-type: none"> • Additional legislations, plans and programmes suggested in the submission should be taken into account for SEA. • Environmental Impacts: <ul style="list-style-type: none"> – Population & Human Health: Food security should be considered adequately and reduced accessibility of food in situations exacerbated by climate change such as droughts and flooding. – Water: In some locations, waste from land can impede or prevent the ability to realise marine-dependent economic opportunities such as shellfish aquaculture that might otherwise occur. • SEA Objectives: <ul style="list-style-type: none"> – Material Assets: Request explicit recognition of the locational requirements associated with different kinds of economic activity e.g., Aquaculture and Fisheries. These functional needs should be considered explicitly when identifying the principles for priority locations for varying needs. 	<ul style="list-style-type: none"> • Note Appendix E of the SEA contains a list of other relevant P/Ps not referenced in Chapter 4. • Environmental impacts are considered as relevant in the respective baseline environment Section 5.3 of this ER and in the assessment of proposed changes under the revised NPF. • Suggestions on the draft SEO Objectives for Material Assets have been taken on board and the objectives amended as relevant in Chapter 6 of this ER.

Table 2: Written Scoping Submission – Non-Statutory Consultees

Consultee	Summary of Issues Raised	How are these addressed..?
Department of Agriculture, Environment and Rural Affairs Northern Ireland (DAERA- NI)	Comments for the draft first revision of NPF and SEA <ul style="list-style-type: none"> Additional policies listed in submission should be considered where development is planned adjacent to Lough Foyle and Carlingford Lough or at hydrologically linked sites. 	<ul style="list-style-type: none"> Appendix E of the SEA contains a (non-exhaustive) list of other relevant P/Ps not referenced in Chapter 4.
	Comments for the SEA <ul style="list-style-type: none"> For Environmental Scope: Consider 'Seascapes' where relevant. For the baseline: <ul style="list-style-type: none"> The character of the Northern Ireland marine and terrestrial environment can be included as this could be affected by the proposed draft first revision of NPF. In Table 6-1, DAERA Marine Map Viewer can be used for the following sections: Biodiversity, Flora and Fauna section, Cultural Heritage section and the Landscape section. In addition, we advise using DFI Flood mapping for the Air Quality and Climatic Factors section. Potential impacts for consideration within the SEA ER: <ul style="list-style-type: none"> Cultural Heritage: Impacts on underwater archaeology and heritage features e.g. from extensive offshore renewable energy development during marine planning, is listed as a potential environmental issue. Biodiversity, Flora and Fauna: Impacts on transboundary National Designations such as ASSIs and MCZs and Northern Ireland priority species should also be considered. Potential impacts of litter on these from recreation and tourism should also be included. Land and Soils: 'Coastal erosion' under effects on geomorphology should be included. SEA assessment: The assessment should record any marine effects and potential transboundary marine effects along with the characterisation of these effects. SEA objectives: <ul style="list-style-type: none"> Objective for Cultural Heritage should consider including reference to 'underwater' archaeology. Objective for Material Assets can include '<i>maximise opportunities for co-creation / co-location opportunities with marine / maritime area</i>'. Objective for Biodiversity, Flora and Fauna: Recommend including marine habitats and species, priority species and including a target for Invasive Non-Native Species management 	<ul style="list-style-type: none"> Reference to seascape was incorporated as relevant as the part of the baseline, SEOs and assessments in this report. Baseline character of Northern Ireland's environment is considered in Chapter 5 as relevant. Environmental impacts are considered as relevant in the respective baseline environment Chapter 5 of this ER and in the assessment of proposed changes under the revised NPF. Potential for both positive and negative transboundary effects will be noted in the baseline and assessments as relevant. Mitigation and monitoring measures will be included in the ER and NIS. Suggestions on the draft SEO Objectives have been taken on board and the objectives amended as relevant in Chapter 6 of this ER.
	Comments for the SFRA <ul style="list-style-type: none"> Advise incorporating natural resilience to flooding and ensuring inappropriate development does not occur in present and future floodplains. 	<ul style="list-style-type: none"> SFRA has proposed mitigation of implementing the Flooding Systems and Flood Risk Management Guidelines as relevant.



Appendix C

Summary of SEA Scoping Workshop

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List of Attendees to SEA Scoping Workshop

Organisation Represented - Table 1	Organisation Represented - Table 2
Organisation Represented - Table 3	Organisation Represented - Table 4
Organisation Represented - Table 5	Organisation Represented - Table 6

Summary of Issues Raised By Topic

Topic 1 - What environmental impacts / constraints should be considered in the SEA for the draft NPF First Revision?

- Implications in relation to Nature Restoration Law.
- Land management in the face of increasing land demands for e.g., for wind/solar farm developments.
- Alignment of NPF with NMPF.
- Development of port infrastructure to accommodate the increased vessel traffic in coastal areas.
- Climate proofing required for coastal areas.
- Viability between brownfield and greenfield development - environmental implications of both should be considered.

Topic 2 - What Reasonable Alternatives Should be Considered for the Draft NPF First Revision?

Reconsider previous NPF 2018 alternatives

Prioritise spatial equity particularly in north-western region and Midlands

Greater focus to flood risk management

Regional Growth Centres should be given higher prominence

City and town centres to have a greater focus

Inclusion of nature-based solutions at a national policy level

Policy approach for regional development could be more targeted and more nuanced for each region

Compact growth and the need to ensure adequate water supply, biodiversity, provision of trees and urban greening etc.

Re-evaluation of MASPS

Is 50:50 split for growth achievable? – should it be adjusted to 60:40 (Dublin Regional)

NPF currently targets growth in five cities – should fewer cities be targeted?

Support linear growth along transport corridors

Having a resilient electricity grid which supports targeted growth

Are the current MASPs appropriate considering sea level rise, extreme weather events and flooding?

Allocation of more than 50% of growth away from Dublin

Alternative future could be significantly influenced by artificial intelligence (AI) and new ways of working, which could have spatial implications; dispersed working should be factored-in

Development of green spaces and amenities should take place in parallel with increasing housing development

Infrastructure development projects can be targeted into the NW regions and midlands to provide employment opportunities in such areas.

Regional Development Monitor for RSES is good template

Long term implications for climate

Alignment of NPF monitoring with the monitoring for NMPF and have a holistic approach

Managed retreat needed for areas already prone to flooding in the context of increased flood risk from climate change – cork mentioned.

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Topic 3 - What Other Relevant Plans and Programmes Should be Considered in the SEA and in Preparation of the Draft NPF First Revision?

- River Basin Management Plan
 - Water Services Strategic Plan
 - National Water Resource Framework
 - Sludge Management Plan
 - Local Economic plans
 - National and Local Authority Climate Action Plans
 - Land use and land use change, forestry plans
 - Water Abstractions and Impounding Act
 - Dumping at Sea Act
 - Transport Plans
 - Brownfield Strategy
 - OREDP II
 - Seafood Development Programme
 - Biomethane strategy
 - Marine Research and Innovation Strategy
-



Appendix D

RESPF GIS Methodology

Key Input Factors Determining the Regional Allocation of Power Capacity (MW) Targets

Determining the regional targets for wind and solar generation capacity was a process which considered multiple aspects, including spatial, technical, environmental, and socio-economic factors. Delivering on the targets outlined in CAP 2023 in a fair, equitable, and sustainable manner was a guiding principle for the development of the regional targets. This required that a more equitable distribution across the State in terms of renewable generation capacity is achieved by 2030. The key factors which impacted the determination of regional allocation targets are listed below.

Current Installed Capacity

A review of current installed onshore wind and solar PV capacity was undertaken and its regional and spatial distribution as shown in the table below.

Table 1- Regional Distribution of Current Installed Capacity for Onshore Wind and Solar

Region	Total Operational or Energised Wind 2022 (MW)	Total Operational or Energised Solar, 2022 (MW)	Total Operational or Energised Wind and Solar, 2022 (MW)
Eastern and Midland	412	236	648
Northern and Western	1,765	0	1,765
Southern	2,465	107	2,572
Total	4,642	343	4,985

Geospatial Analysis

A geospatial assessment exercise and analysis was carried out to ascertain the quantum of theoretically developable land nationally and this was used to understand the ability of the regions to deliver additional renewable electricity capacity.

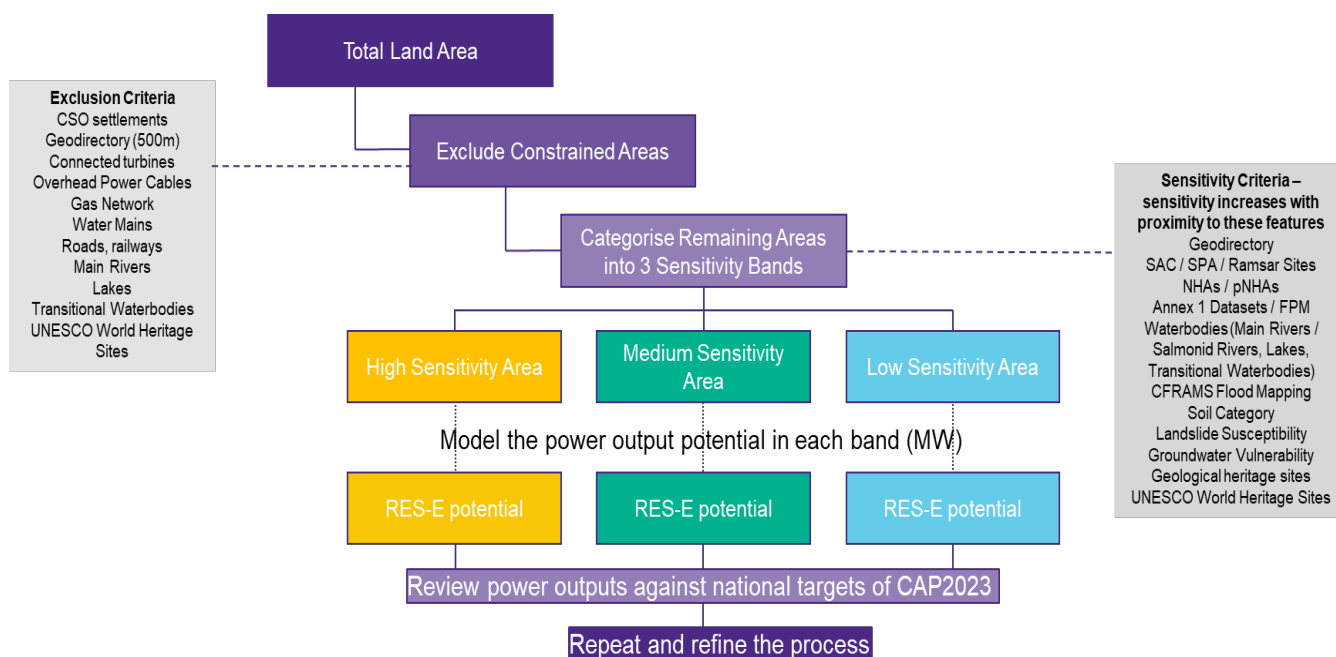


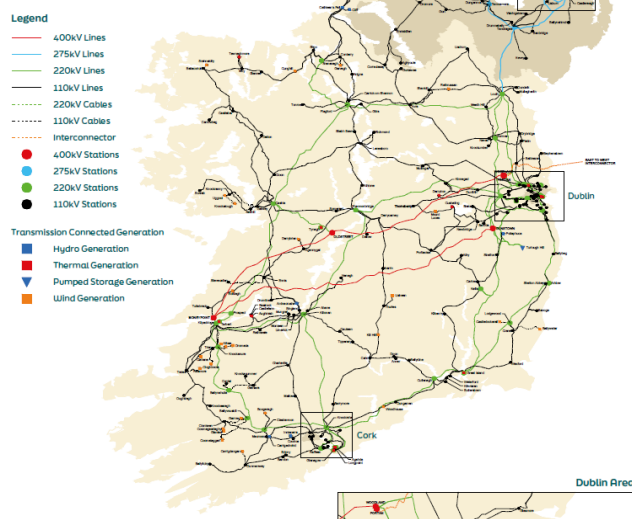
Figure 1- Process for Geospatial Assessment and Analysis

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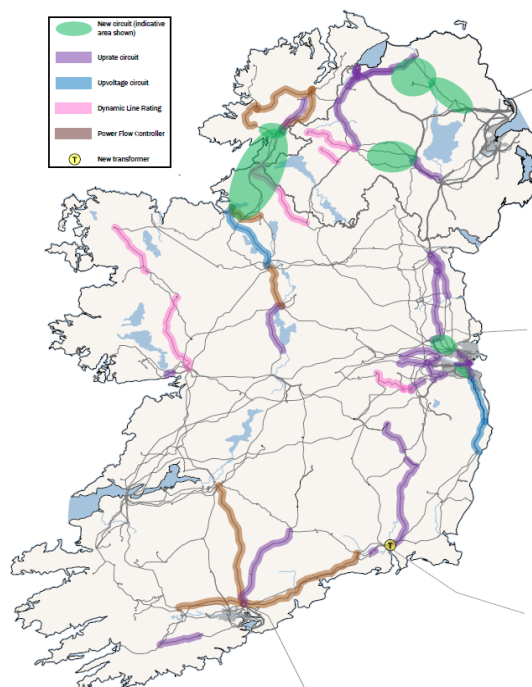
Grid Capacity

The assessment was informed through a review of existing and planned development and reinforcement of the electricity network infrastructure through consultation with stakeholders from EirGrid and ESB Networks and supported by a review of EirGrid's 'Shaping our Electricity Future' (2021) report a review of ESBN's 'Networks for Net Zero Strategy'.

Transmission System Map



Transmission System Map (EirGrid 2023)



Map of Ireland detailing reinforcement (EirGrid, 2021)

Projected Pipeline

A review of the potential future installed wind and solar capacity as advised by industry, analysed on a regional basis, was carried out to inform the setting of targets.

The projected pipeline of development provided by Wind Energy Ireland was a consideration when developing the regional targets. These figures approximated an even split of planned projects between the three regions, claiming in 2022 over 10GW of projects at various stages of planning (including 3.5GW at feasibility stage) ranging from 30% in Eastern & Midland to 36% in Northern & Western.

The projected pipeline of solar development provided by the Irish Solar Energy Association in 2022 was also considered. These projections suggest almost 8GW of projects at various stages of planning giving the highest percentage of planned projects in the Eastern & Midland region (50%), followed by the Southern region (45%). Approximately 3.5GW of this is categorised as 'Future ECP' projects by ISEA.



Appendix E

Relevant Plans and Programmes

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Note: This appendix is **not intended to be an exhaustive inventory** of all environmental or land use planning-related legislation, plans, programmes or policies. Rather, it is a consideration of the objectives of key texts which are relevant to the draft Plan and supplements **Chapter 4** of the SEA Environmental Report.

Review of International Level Plans and Programmes

Topic	Title	Summary of Objectives: International
Human Health/ Air Quality/ Emissions	Stockholm Convention on Persistent Organic Pollutants (POPs) (2004)	Global treaty with the objective of seeking to protect human health and the environment from persistent organic pollutants (POPs).
	World Health Organisation (WHO) Air Quality Guidelines (1999) and Guidelines for Europe (1987)	Objectives seek the elimination or minimisation of certain airborne pollutants for the protection of human health.
	The Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (1999)	The 1999 Gothenburg Protocol (known as the Multi-effect Protocol or the Gothenburg Protocol) is a multi-pollutant protocol designed to reduce acidification, eutrophication and ground-level ozone by setting emissions ceilings for sulphur dioxide, nitrogen oxides, volatile organic compounds and ammonia to be met by 2010. As of August 2014, the Protocol had been ratified by 26 parties, which includes 25 states and the European Union.
	The 1979 Geneva Convention on Long-range Transboundary Air Pollution (LRTAP)	The LRTAP was the first international legally binding instrument to deal with problems of air pollution on a broad regional basis. It was signed in 1979 and entered into force in 1983. It has since been extended by eight specific protocols. The Convention is one of the central means for protecting our environment. It has substantially contributed to the development of international environmental law and has created the essential framework for controlling and reducing the damage to human health and the environment caused by transboundary air pollution. It is a successful example of what can be achieved through intergovernmental cooperation.
	Minamata Convention on Mercury (2017)	Global treaty with the objective of protecting human health and the environment from the adverse effects of mercury.
Biodiversity	UN Convention on Biological Diversity (1992)	<p>The Convention on Biological Diversity (CBD), known informally as the Biodiversity Convention, is a multilateral treaty. The Convention has three main goals:</p> <ul style="list-style-type: none"> • Conservation of biological diversity (or biodiversity); • Sustainable use of its components; and • Fair and equitable sharing of benefits arising from genetic resources. <p>In other words, its objective is to develop national strategies for the conservation and sustainable use of biological diversity. It is often seen as the key document regarding sustainable development. The Convention was opened for signature at the Earth Summit in Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993.</p>
	Ramsar Convention on Wetlands of International	Objectives include protection and conservation of wetlands, particularly those of importance to waterfowl as Waterfowl Habitat.

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Topic	Title	Summary of Objectives: International
	Importance (1971 and amendments)	
	The Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR) (1992)	Objectives include international cooperation on the protection of the marine environment of the north-east Atlantic.
	Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals) 1983	<p>The Bonn Convention focuses on preserving the habitats used by migratory species and aims to enhance the conservation of terrestrial, marine and avian species on a global scale throughout their range. Key actions/ provisions under the Convention include:</p> <ul style="list-style-type: none"> • Establishment of a legal foundation for internationally coordinated conservation measures throughout a migratory range; • Migratory species threatened with extinction are listed on Appendix I of the Convention. CMS Parties strive towards strictly protecting these animals, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them; and • In Europe, legislation to ensure that the provisions of the Bonn Convention are applied includes the Birds Directive and the Habitats Directive.
	Bern Convention (Convention on European Wildlife and Natural Habitats) 1982	The Bern Convention is a binding international legal instrument in the field of nature conservation, covering most of the natural heritage of the European continent and extending to some States of Africa.
	UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) (1998)	The Aarhus Convention has the objective of guaranteeing the rights of access to information (first pillar), public participation in decision-making (PPDM) (second pillar), and access to justice (third pillar) in environmental matters in order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being.
Climate Change	Paris Agreement (UNFCCC, 2015)	<p>The Paris Agreement and the outcomes of the UN climate conference (COP21) cover all the crucial areas identified as essential for a landmark conclusion:</p> <ul style="list-style-type: none"> • Mitigation – reducing emissions fast enough to achieve the temperature goal; • A transparency system and global stock-take – accounting for climate action; • Adaptation – strengthening ability of countries to deal with climate impacts; • Loss and damage – strengthening ability to recover from climate impacts; and • Support – including finance, for nations to build clean, resilient futures.

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Topic	Title	Summary of Objectives: International
	UN Kyoto Protocol, The United Nations Framework Convention on Climate Change (UNFCCC, 1997)	<p>The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty negotiated at the Earth Summit in Rio de Janeiro from 3 to 14 June 1992, then entered into force on 21 March 1994. The UNFCCC objective is to 'stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'. The framework set no binding limits on greenhouse gas emissions for individual countries and contains no enforcement mechanisms. Instead, the framework outlines how specific international treaties (called 'protocols' or 'Agreements') may be negotiated to set binding limits on greenhouse gases.</p> <p>Annual UNFCCC Climate Change Conferences (Conference of the Parties) are held to discuss measures, particularly those that were to be taken after the second commitment period ended in 2020. This resulted in the 2015 adoption of its successor, the Paris Agreement (see entry above) at COP21, which is a separate instrument under the UNFCCC rather than an amendment to the Protocol.</p>
Sustainability	UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention) 1991	This convention entered into force in 1997. It sets out the obligations of parties to carry out, at an early stage, an EIA of certain activities. It sets out the general obligation of States to notify and consult with each other on major projects that are likely to have a significant adverse environmental impact across boundaries. The SEA Protocol augments the Espoo Convention by ensuring that individual Parties integrate environmental assessment into their plans and programmes at the earliest stages.
	United Nations Sustainable Development Goals	The United Nations Sustainable Development Goals (SDGs) frame national agendas and policies to 2030. The SDGs build on the UN Millennium Development Goals and have a broader agenda that applies to all counties.
	North Atlantic Salmon Conservation Organisation Implementation Plans 2019-2024	The North Atlantic Salmon Conservation Organisation (NASCO) was established by the Convention for the Conservation of Salmon in the North Atlantic Ocean in 1984. NASCO's objective is conserve, restore, enhance and rationally manage Atlantic salmon through cooperation of six Governments and the European Union. Implementation plans are prepared by each jurisdiction to demonstrate what actions are being taken by the parties to implement NASCO's resolutions, agreements and guidelines.
	UN SEEA – Ecosystem Accounting (United Nations, 2021)	The SEEA Ecosystem Accounting (SEEA EA) constitutes an integrated and comprehensive statistical framework for organizing data about habitats and landscapes, measuring the ecosystem services, tracking changes in ecosystem assets, and linking this information to economic and other human activity. The UN Statistical Commission adopted the SEEA Ecosystem Accounting at its 52 nd session in March 2021.
Cultural Heritage	World Heritage Convention United Nations Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, 1972)	Objectives seek to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage and ensure that effective and active measures are taken for these.

Review of European Level Plans and Programmes

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Topic	Title	Summary of Objectives: European
Biodiversity	EU Biodiversity Strategy to 2030	The biodiversity strategy aims to put Europe's biodiversity on the path to recovery by 2030 for the benefit of people, climate and the planet. In the context of the post-COVID-19 pandemic, it aims to build resilience to future threats, including climate change, security of food supplies, forest fires, outbreaks of disease and combating the illegal trade in wildlife. It aims to increase the Natura 2000 network, and will launch an EU restoration plan by the end of 2021. To enable implementation, it also aims to allow better tracking of progress, improving knowledge transfer and emphasising 'respect for nature' in decision making (public and business).
	EU proposal for a Nature Restoration Law	The EU proposal for a Nature Restoration Law aims to address the severe decline in biodiversity across the EU and to return ecosystems to good conservation condition. The rules will aim to set a binding target at EU-level where member states will have to enact restoration measures that cover at least 20% of land and sea areas of the EU by 2030. For those ecosystems that require restoration, measures must be put in place by 2050.
	EC 8 th Environmental Action Programme (EAP) to 2030	In October 2020, the EC published a proposal for the 8th EAP. Its aim would be to support and build on the environmental aspects of the Green Deal to 2050. Its six priority objectives are to: <ul style="list-style-type: none"> • Achieve greenhouse gas reduction targets and for the EU to be climate neutral by 2050. • Enhance adaptiveness and increase resiliency to the effects of climate change. • To decouple economic growth from resource use and therefore degradation of the environment, while transitioning to a circular economy. • Aiming for a zero-pollution environment and to protect the health and wellbeing of all Europeans. • Restoring biodiversity and enhancing natural capital/ecosystems. • To reduce pressures on the environment and the climate from consumption/production, namely industry, energy, buildings, infrastructure, mobility and food systems.
	Prioritised Action Framework for Natura 2000 in Ireland (2021-2027) (NPWS, 2021)	The Prioritised Action Framework (PAF) plan for the period 2021-2027 was published in March 2021 for public consultation until September 2020. The finalised PAF will aim to provide a comprehensive overview of prioritised measures that are needed to manage the EU-wide Natura 2000 network.
	Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive (92/43/EEC)	The Habitats Directive (92/43/EEC) provides legal protection for habitats and species of wild plants and animals of European importance. The Directive protects around 1200 European species, other than birds, which are considered to be endangered, vulnerable, rare and/or endemic. Included in the Directive are mammals, reptiles, fish, crustaceans, insects, molluscs, bivalves and plants. Together with the Birds Directive, it underpins a European network of protected areas known as Natura 2000: Special Protection Areas (SPAs, classified under the Birds Directive) and Special Areas of Conservation (SACs, classified under the Habitats Directive). Objectives of the Habitats Directive include: <ul style="list-style-type: none"> • Propose and protect sites of importance to habitats, plant and animal species; • Establish a network of Natura 2000 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; and • Establish a system of strict protection for the animal species and plant species listed in Annex IV.

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Conservation of Wild Birds (Birds) Directive (79/409/EEC)	<p>The Birds Directive protects all wild birds, their nests, eggs and habitats within the European Community. It gives EU member states the power and responsibility to classify Special Protection Areas (SPAs) to protect birds which are rare or vulnerable in Europe, as well as all migratory birds which are regular visitors.</p> <p>Objectives seek to prevent and eliminate the causes of bird species loss and maintain and enhance current levels of biodiversity;</p> <ul style="list-style-type: none"> • Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Annex I; • 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; and • 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; and • Ensuring the protection of wetlands and particularly wetlands of international importance. 								
EU Regulation (1143/2014) on the Prevention and Management of the Introduction and Spread of Invasive Alien Species	<p>This regulation sets out rules to prevent, minimise and mitigate the adverse effects of the introduction and spread of invasive alien species within the Union, both intentional and unintentional, on biodiversity and related ecosystem services, and on human health and safety, as well as to reduce their social and economic impact.</p>								
Air Quality	<table> <tr> <td>EU Clean Air Package (2013) & A Clean Air Programme for Europe (COM(2013) 918)</td><td> <p>The clean air 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. 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No. 33 of 1999.</p> <p>The fourth Daughter Directive was transposed into Irish legislation by the Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. No. 58 of 2009).</p> </td></tr> <tr> <td>Integrated Pollution Prevention Control (IPPC) Directive (Codified) (2008/1/EC)</td><td> <p>The purpose of this Directive is to achieve integrated prevention and control of pollution arising from the activities listed in Annex I. 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	National Emissions Ceiling (NEC) Directive (2016/2284/EU)	<p>The Convention on Long-Range Transboundary Air Pollution (CLRTAP) and aims to control and reduce local and long-range air pollution. The protocol is enacted in Directive (EU) 2016/2284 of the European Parliament of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing the previous NEC Directive (2001/81/EC).</p> <p>The Directive sets national reduction commitments for the five pollutants (sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter) The NECD sets national emission ceilings for four main pollutants, namely that of sulphur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOCs) and ammonia (NH₃). These pollutants are responsible for long-range transboundary air pollution such as acidification, eutrophication and ground-level ozone pollution. Data on these four pollutants are reported to the European Commission under the National Emissions Ceiling Directive on an annual basis.</p>
Sustainable Development	European Green Deal (EC, December 2019)	<p>The green deal is the strategy to make the EU more sustainable by 2050, recognising climate change and degradation of the natural environment as critical threats. It has an action plan which sets out a roadmap and actions. The actions areas cover the following:</p> <ul style="list-style-type: none"> • Biodiversity: measures to protect ecosystems • From Farm to Fork: Looking at more sustainable food production systems • Sustainable agriculture: across the EU in both agriculture and in rural areas, driven by the CAP • Clean energy • Sustainable industry: Sustainable and more environmentally-friendly production cycles • Building and renovating: The need for a cleaner construction sector <p>Sustainable mobility: Promoting more sustainable means of transport</p> <p>Eliminating pollution: Measures to cut pollution rapidly and efficiently, aiming for zero pollution, and supported by the EU Chemicals Strategy</p> <p>Climate action: Aiming to make the EU climate-neutral by 2050</p> <hr/> <p>Proposal for a Decision on a General Union Environment Action Programme to 2030</p> <p>The Council, the European Parliament and the Committee of the Regions called upon the Commission to present at the latest by early 2020 a proposal for an 8th EAP. The 8th EAP, with its long-term vision and environmental priority objectives it shares with the Green Deal, will support the EU's common commitment to a green recovery.</p> <hr/> <p>EU Action Plan: Towards a Zero Pollution for Air, Water and Soil (and annexes) (EC, May 2021)</p> <p>The Zero Pollution Action Plan is a key deliverable of the European Green Deal. The vision for 2050 is for air, water and soil pollution to be reduced to levels no longer considered harmful to health and natural ecosystems, that respect the boundaries with which our planet can cope, thereby creating a toxic-free environment. The action plan aims to strengthen the EU green, digital and economic leadership, whilst creating a healthier, socially fairer Europe and planet. It provides a compass to mainstream pollution prevention in all relevant EU policies, to step up implementation of the relevant EU legislation and to identify possible gaps.</p> <hr/> <p>EU Chemicals Strategy for Sustainability Towards a Toxic-Free Environment (EC, October 2021)</p> <p>Global chemical use is projected to double by 2030, and while essential for life, chemicals can also have hazardous properties and can be toxic to human health and the environment. As such, the EU has prepared this strategy which also ties into the Green Deal and the Circular Economy Action Plan. It aims for zero pollution, including reducing hazardous waste streams, and to protect human and environmental health. It aims to streamline the coherence between waste, chemicals and products legislation, aiming to close gaps in how hazardous substances may be handled differently under different legislation.</p>

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The Common Agricultural Policy (CAP)	Aims to provide farmers with a reasonable standard of living, consumers with quality food at fair prices and to preserve rural heritage. With increased development pressure from urban areas, protection of rural communities and agricultural enterprise must be considered.
EU Farm to Fork Strategy (EC, 2020) <i>[part of EU Green Deal]</i>	This strategy is at the heart of the European Green Deal, aiming to make food systems fair, healthy and environmentally friendly. The Farm to Fork Strategy aims to accelerate the transition to a sustainable food system that should; have a neutral or positive environmental impact; help to mitigate climate change and adapt to its impacts; reverse the loss of biodiversity ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food; and preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade.
Horizon Europe	Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion. It supports European partnerships and operates across five 'mission areas' as follows: <ul style="list-style-type: none"> • Adaptation to climate change including societal transformation • Healthy oceans, seas, coastal and inland waters • Cancer • Soil health and food • Climate-neutral and smart cities
EC LIFE Programme (2021-2027)	This programme will succeed Horizon 2020 and the EC has indicated it will be the only European funding programme exclusively aimed at the areas of environment, energy and climate. The key priorities will be to halt biodiversity loss, protection and improvement of the environment, and enabling the transition to a circular economy.
SEA Directive (2001/42/EC)	The SEA Directive requires that Plans & Programmes must take into account protection of the environment and integration of the Plan into the sustainable planning of the country as a whole. Eleven sectors are specified in the Directive and Competent Authorities (Plan/ Programme makers) must subject specific Plans and Programmes for these sectors to an environmental assessment where they are likely to have significant effects on the environment. The SEA Directive was transposed into Irish law under S.I. 435/2004, as amended in 2011.
EIA Directive (85/337/EEC), as codified by Directive 97/11/EC, amended Directive 2014/52/EU	The EIA Directive's objective is to require Environmental Impact Assessment of the environmental effects of those public and private projects, which are likely to have significant effects on the environment. The EIA Directive was transposed into Irish law under S.I. 349/1989 (as amended).
Environmental Noise Directive (2002/49/EU) Environmental Noise Directive (EU) 2015/996	The aim of this Directive is to define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. This Directive also aims at providing a basis for developing Community measures to reduce noise emitted by the major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery.

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		It was amended by Directive (EU) 2015/996 establishing common noise assessment methods and replacing Annex II of the 2002 END.
	EU Directive (2019/904) on the Reduction of the Impact of certain Plastic Products on the Environment	The objectives of this Directive are to prevent and reduce the impact of certain plastic products on the environment, in particular the aquatic environment, and on human health, as well as to promote the transition to a circular economy with innovative and sustainable business models, products and materials, thus also contributing to the efficient functioning of the internal market.
	Environmental Noise Regulations 2018 (S.I. No. 549/2018)	END (2002/49/EC) is transposed in Ireland through the Environmental Noise Regulations 2018 (S.I. No. 549/2018). Local authorities publish Noise Action Plans on a regular basis. Environmental noise is unwanted or harmful outdoor sound created by human activities, including noise emitted by means of transport (road, rail and air traffic), and from sites of industrial activity including the categories of activities specified in Annex I to the IED. Nuisance noise is dealt with under the Environmental Protection Agency Act 1992, as amended.
	A Sustainable Bioeconomy for Europe (EC, 2018)	This strategy document updates the 2012 Bioeconomy Strategy and aims to strengthen the connection between economy, society and the environment. It proposes actions to strengthen and scale-up the bio-based sectors, unlock investments and markets, deploy local bioeconomies rapidly across Europe and understand the ecological boundaries of the bioeconomy.
	Indirect Land Use Change Directive (2015/1513)	<p>Directive 2015/1513 amends the Renewable Energy Directive and the Fuel Quality Directive to address indirect land-use change (ILUC). Member States are obliged to transpose the Directive into national legislation by 10 September 2017 and should establish the level of their national indicative sub-targets for advanced biofuels by 6 April 2017.</p> <p>While biofuels are important in helping the EU meet its greenhouse gas reductions targets, biofuel production typically takes place on cropland which was previously used for other agriculture such as growing food or feed. Since this agricultural production is still necessary, it may be partly displaced to previously non-cropland such as grasslands and forests. This process is known as indirect land use change (ILUC).</p>
	Ecodesign Framework Directive (2009/125/EC)	This Directive establishes a framework for the setting of Community eco design requirements for energy-related products with the aim of ensuring the free movement of such products within the internal market. This Directive provides for the setting of requirements which the energy-related products covered by implementing measures must fulfil in order to be placed on the market and/or put into service. It contributes to sustainable development by increasing energy efficiency and the level of protection of the environment, while at the same time increasing the security of the energy supply.
Water	Water Framework Directive (WFD) (2000/60/EC) (as amended by Decision 2455/2001/EC and Directives 2008/32/EC, 2008/105/EC and 2009/31/EC)	<p>WFD objectives overall seek to maintain and enhance the quality and quantity of all surface waters i.e., rivers, estuaries, coasts and aquifers, in the EU and to prevent the deterioration of aquatic ecosystems and associated wetlands by setting out a timetable until 2027 to achieve good ecological status or potential. Member States are required to manage the effects on the ecological quality of water which result from changes to the physical characteristics of water bodies. Action is required in those cases where these 'hydro-morphological' pressures are having an ecological impact which will interfere with the ability to achieve WFD objectives. The assessment of potential impacts on water quality needs to be considered in the context of the WFD and the River Basin Management Plan and Programme of Measures for the River Basin districts which lays out the objectives for all waters within the individual district. It is noted the next cycle of River Basin Management Plans is due in 2017. Key objectives of the WFD include:</p> <ul style="list-style-type: none"> • Identification and establishment of individual river basin districts;

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- Preparation of individual river basin management plans for each of the catchments. These contain the main issues for the water environment and the actions needed to deal with them;
- Establishment of a programme of monitoring water quality in each RBD; and
- Establishment of a Register of Protected Areas (includes areas previously designated under the Freshwater Fish and Shellfish Directives which have become sites designated for the protection of economically significant aquatic species under WFD and placed on the Protected Areas register).

Promotion of sustainable management of the water environment by carefully considering current land use and future climate scenarios, minimising the effects of flooding and drought events and facilitating long term improvements in water quality, including the protection of groundwater near landfill sites, as well as minimising agricultural runoff. The following Directives have been subsumed into the Water Framework Directive:

- The Drinking Water Abstraction Directive;
- The Sampling Drinking Water Directive;
- The Exchange of Information on Quality of Surface Freshwater Directive;
- The Shellfish Directive;
- The Freshwater Fish Directive;
- The Groundwater (Dangerous Substances) Directive; and
- The Dangerous Substances Directive.

EU Dangerous Substances Directive (2006/11/EC); codified version of Directive (76/464/EEC)	This Directive lays down rules for protection against, and prevention of, pollution resulting from the discharge of certain substances into the aquatic environment. It applies to inland surface water, territorial waters and internal coastal waters.
Marine Strategy Framework Directive (MSFD) (2008/56/EC)	The aims of the MSFD are to protect the marine environment across Europe through achieving and maintaining good environmental status of marine waters by 2020, and acts as complimentary legislation to the WFD. To achieve this goal the directive has set out marine regions; Ireland falls within the North-east Atlantic Ocean Region and for the purposes of the MSFD Ireland is required to produce a Maritime Spatial Plan (MSP), preparation of which is underway and required on or before March 2021 at the latest. The first phase of work and public consultation has been completed and involved the assessment and characterisation of Ireland's marine waters. The Marine Strategy Framework Programme of Measures has been prepared and the next phase will involve the eventual implementation of environmental targets. The MSP will ensure there is a system in place for managing human activities and to achieve and maintain good environmental status of marine waters.
Maritime Spatial Planning Directive (2014/89/EU)	This Directive establishes a framework for maritime spatial planning aimed at promoting the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources. Within the Integrated Maritime Policy of the Union, that framework provides for the establishment and implementation by Member States of maritime spatial planning, with the aim of contributing to the objectives specified in Article 5, taking into account land-sea interactions and enhanced cross-border cooperation, in accordance with relevant UNCLOS provisions.
Common Fisheries Policy Regulation (EU) (1380/2013)	This Regulation lays down provisions concerning the Common Fisheries Policy (CFP), which covers the following: (a) the conservation of marine biological resources and the management of fisheries and fleets exploiting such resources; (b) in relation to measures on markets and financial measures in support of the implementation of the CFP, fresh water biological resources, aquaculture, and the processing and marketing of

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	fisheries and aquaculture products. The CFP applies to activities carried out in the territories of the Member States, in European Union waters and by European Union fishing vessels outside European Union waters. The aim of the CFP is to ensure that fishing and aquaculture activities are environmentally sustainable in the long-term and are managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies.
EU Shellfish Waters Directive (2006/113/EC)	This Directive concerns the quality of shellfish waters and applies to those coastal and brackish waters designated by the Member States as needing protection or improvement in order to support shellfish (bivalve and gastropod molluscs) life and growth and thus to contribute to the high quality of shellfish products directly edible by man.
EU Organic Regulations (EC 834/2007, EC 889/2008, EC 710/2009)	Commission Regulation (EC) No 710/2009 of August 5, 2009, amending Regulation (EC) No 889/2008, lays down detailed rules for the implementation of Council Regulation (EC) No 834/2007, as regards laying down detailed rules on organic aquaculture animal and seaweed production.
Floods Directive (2007/60/EC)	The Floods Directive applies to river basins and coastal areas at risk of flooding. It prescribes a three-step procedure for the assessment and management of flood risks: The first stage was the preparation of Preliminary Flood Risk Assessments. The second stage was carrying out Risk Assessments, and the third stage was the preparation of the Flood Risk Management Plans.
Bathing Water Directive (2006/7/EC)	The overall objective of the revised directive remains the protection of public health whilst bathing, but it also offers an opportunity to improve management practices at bathing waters and to standardise the information provided to bathers across Europe. Bathing waters are an important resource and it is therefore essential that the standards within the Bathing Water Directive are adhered to. The Directive was transposed onto Irish law under the Bathing Water (Amendment) Regulations S.I. 79/2008.
Groundwater Directive (2006/118/EC)	Objectives seek to maintain and enhance the quality of all groundwaters in the EU. The Environmental Objectives (Groundwater) Regulations S.I. 9/2010 was transposed into Irish Law and gives effect to the Groundwater Directive.
Drinking Water Directive (80/778/EEC) as amended by Directive 98/83/EC and new Directive (EU) 2020/2184 (recast)	The primary objective is to protect the health of the consumers in the European Union and to make sure drinking water is wholesome and clean. Following a review of fitness, the recast directive will enter in force from January 2021. The revised directive goes beyond the WHO's recommendations and applies more stringent quality standards and introduces a risk-based approach.
Urban Wastewater Treatment Directive (91/271/EEC), as amended by Directive 98/15/EEC	The primary objective is to protect the environment from the adverse effects of discharges of urban wastewater, by the provision of urban wastewater collecting systems (sewerage) and treatment plants for urban centres. The Directive also provides general rules for the sustainable disposal of sludge arising from wastewater treatment. The directive is now proposed to be revised, following the adoption of the 10 th EC report on the implementation of the directive, finding that significant challenges remain and investment is still required to meet quality and health standards across Europe.
Sewage Sludge Directive (86/278/EEC)	The objective of the directive is to encourage the use of sewage sludge in agriculture and to regulate its use in such a way as to prevent harmful effects on soil, vegetation, animals and man. To this end, it prohibits the use of untreated sludge on agricultural land unless it is injected or incorporated into the soil. The Directive is given effect in Irish law by the Waste Management (Use of Sewage Sludge in Agriculture) (Amendment) Regulations (S.I. 267/2001).

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	Nitrates Directive (91/676/EEC)	The directive has the objective of reducing water pollution caused or induced by nitrates from agricultural sources. Under the regulations, sewage sludge is considered a fertiliser under the definitions of the regulations: ‘fertiliser’ means any substance containing nitrogen or phosphorus or a nitrogen compound or phosphorus compound utilised on land to enhance growth of vegetation and may include livestock manure, the residues from fish farms and sewage sludge. The Nitrates Regulations provide for the mandatory implementation of agricultural measures for protecting surface and groundwater quality by all Irish farmers. The measures include limits on storage and land spreading of nutrients, including no-spread zones adjacent to drinking water abstraction points, and uncultivated buffer/riparian strips, to prevent nutrients and sediment from entering water.
	Priority Substances Directive (2013/39/EU)	<p>This directive amends Directives 2000/60/EC (WFD) and 2008/105/EC (Environmental Quality Standards Directive [EQSD]) regarding priority substances and water policy. Directive 2000/60/EC set out a strategy against water pollution, including the identification of priority substances pose a significant risk to, or through, the aquatic environment.</p> <p>The first list of priority substances (Annex X to the WFD) was established through Decision 2455/2001/EC. This list was replaced by Annex II of the EQSD, also known as the Priority Substances Directive, which also set EQS for the substances in surface waters. The list was replaced again in 2013 by Annex I to Directive 2013/39/EU, which also included EQS and some other provisions on chemical pollutants.</p>
	Environmental Liabilities Directive (2004/35/EC)	The Directive was transposed onto Irish law under S.I. 547/2008. The objective is the ‘polluter pays’ principle wherein those whose activities have caused environmental damage are held financially liable for remedying that damage; the legislation is particularly aimed at impacts to water quality status under the Water Framework Directive.
Waste	Critical Raw Materials Act, 2024	The Critical Raw Materials Act, 2024 seeks to secure diversified, affordable and sustainable supplies of critical raw materials which are both strategically important and / or have associated supply chain risks. These raw materials are used in car parts, satellites, mobile phones and many modern household items. They are critical to the EU efforts to achieve a green transition as many clean energy systems rely on them. The Act establishes three key targets for raw materials by 2030: 10% from local extraction; 40% to be processed in the EU and 25% to come from recycled materials.
	Waste Framework Directive (2008/98/EC) and Amendment to the EU Waste Framework Directive, 2018	<p>The directive sets out the definitions of waste and basic management principles for waste in order to ensure waste is managed so as to not impact the environment or human health. The Directive lays down some basic waste management principles: it requires that waste be managed without endangering human health and harming the environment, and in particular without risk to water, air, soil, plants or animals, without causing a nuisance through noise or odours, and without adversely affecting the countryside or places of special interest. The Directive requires that waste legislation and policy of EU Member States is applied according to a waste management hierarchy.</p> <p>The new Directive places responsibility on EU Member States to improve their waste management systems, to improve the efficiency of resource use, and to ensure that waste is valued as a resource.</p>
	EU Circular Economy Action Plan (2020)	In response to the challenges faced regarding the sustainable use of resources linking issues such as the extraction of raw materials, the production and use of products and how we handle waste, the EU signed up to a Circular Economy (CE) Package in December 2015. The EU’s first Circular Economy Action Plan was completed in 2019, with much progress made on its 54 actions. The new Circular Economy Action Plan was published in March 2020 and forms one of the pillars of the EU Green Deal – the strategy to make the EU more sustainable by 2050. As part of this Action Plan, the Waste Framework Directive was amended in 2018 by Amending

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		<p>Directive (EU) 2018/851. The revised directive places responsibility on EU Member States to improve their waste management systems, to improve the efficiency of resource use, and to ensure that waste is valued as a resource.</p> <p>The policies and legislative proposals contained in the EU's Circular Economy Package and Circular Economy Action Plan are designed to aid the transition towards a circular economy and provide the legal framework to enable the circular economy.</p>
Human Health	Biocidal Products (98/8/EC and 2007/107/EC)	A biocide is classified as a substance (whether chemical or biological) designed to destroy or render harmless a harmful organism (e.g. disinfectants, preservatives etc.). These products have a high degree of regulation owing to the potential effects on human health and the environment. The directive is regularly updated as new products are manufactured and authorised. The new Biocidal Products Regulation (Regulation EU 528/2012) has been transposed by the European Union (Biocidal Products) Regulations S.I. 427/2013.
	Regulation (EU) No 1169/2011 on the provision of food information to consumers	This Regulation provides the basis for the assurance of a high level of consumer protection in relation to food information, taking into account the differences in the perception of consumers and their information needs whilst ensuring the smooth functioning of the internal market. It establishes the general principles, requirements and responsibilities governing food information, and in particular food labelling, and applies to food business operators at all stages of the food chain, where their activities concern the provision of food information to consumers.
	Food Safety Regulations package (EU 852, 853 & 854 of 2004)	The European Commission set out food hygiene regulations which require food business operators (except primary producers) to implement a permanent procedure, or procedures, based on HACCP principles. The general hygiene requirements for all food business operators are laid down in Regulation 852/2004. Regulation 853/2004 supplements Regulation 852/2004 in that it lays down specific requirements for food businesses dealing with foods of animal origin. Regulation 854/2004 relates to the organisation of official controls on products of animal origin intended for human consumption.
Climate/ Energy	The EU Policy Framework for Climate and Energy in the period from 2020 to 2030	<p>A Policy Framework for Climate and Energy in the Period 2020-2030 (EU (COM),2014) sets out the EU's 2030 framework for climate and energy, including EU-wide targets and policy objectives for the period between 2020 and 2030. These targets aim to help the EU achieve a more competitive, secure and sustainable energy system and to meet its long-term 2050 greenhouse gas reductions target. This Communication develops a framework for future EU energy and climate policies and launches a process to arrive at a shared understanding of how to take these policies forward in the future.</p> <p>The 2030 Framework sets targets for the period 2020 to 2030:</p> <ul style="list-style-type: none"> • Target of 27% renewable energy in the EU; • Increase energy efficiency by 27% by 2020; and • Reaching electricity interconnection target of 15% between EU countries by 2030.
	The European Climate Law (Regulation (EU) 2021/1119)	In March 2020, the European Commission proposed the first European Climate Law which aims to write into law the goal set out in the European Green Deal; for Europe's economy and society to become climate-neutral by 2050. This sets out a legally binding target of net zero greenhouse gas emissions for EU countries as a whole, by cutting emissions, investing in green technologies and protecting the natural environment. In July 2021, the law entered into force.

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Effort Sharing Regulation for 2030 (Regulation 2018/842)	<p>This legislation establishes binding annual GHG targets for Member States for the periods 2013–2020 and 2021–2030. The targets cover most sectors not included in the EU ETS, such as transport, buildings, agriculture and waste.</p> <p>If national targets are met, this will lead to a collective 10% reduction by 2020 in total EU emissions from the covered sectors, and a 30% reduction by 2030 (compared to 2005 levels).</p> <p>To achieve EU climate neutrality by 2050, the EC is proposing to revise this Regulation and has published an inception impact assessment and is conducting public consultation on the revision.</p>
Effort Sharing Decision 2009 (Decision No. 406/2009/EU)	<p>The 2009 Effort Sharing Decision (Decision No. 406/2009/EU) set individual Member State targets for reductions in non-ETS GHG emissions. The target agreed for Ireland for the year 2020 is that non-ETS emissions should be 20% below their level in 2005 compared to an EU average reduction of 10%. The non-ETS target is legally binding on the State.</p>
Renewable Energy Directive (2009/28/EC) and revised Renewable Energy Directive (EU) 2018/2001 (recast) Renewable Energy Directive [RED] EU 2018/2001 (recast to 2030, RED III)	<p>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. A national target of 16% renewable energy by 2020 has been set for Ireland.</p> <p>The recast directive sets a target of at least 32% for renewable energy, at EU-wide level, with a review clause by 2023 for a potential upward revision of the EU level target.</p> <p>The revised directive (RED III) was published in the Official Journal on 31 October and entered into force on 20 November 2023. It sets an overall renewable energy target of at least 42.5% binding at EU level by 2030 - but aiming for 45%.</p>
Energy Roadmap 2050	<p>The ultimate goal is to cut EU-wide emissions by 90% of 1990 levels by 2050. The EC analysed the implications of this goal as part of its communication 'A Roadmap for moving to a competitive low carbon economy in 2050'. This 2050 Roadmap explores the challenges of this decarbonisation objective while maintaining competitiveness as well as security of supply.</p>
EU Emissions Trading Directive (2003/87/EC) and EU Emission Trading System (ETS) Directive (2018/410)	<p>Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (Text with EEA relevance). This Directive establishes a scheme for greenhouse gas emission allowance trading within the Community (hereinafter referred to as the 'Community scheme') in order to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner. Directive 2018/410 of the European Parliament and of the Council of 14 March 2018 amended Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, as well as Decision (EU) 2015/1814 on the market stability reserve. This amendment is a continuation of the EU Emissions Trading System (EU ETS) as the main European instrument for achieving the European target of reducing GHG emissions by at least 40% from 1990 levels by 2030.</p>
EU Just Transition Fund (EUJTF)	<p>The EU Just Transition Fund (EUJTF) comprises Pillar 1 of the European Union Just Transition Mechanism. The aim of the fund is to assist in the transition to a climate neutral economy for territories that are most affected by climate action objectives. Ireland's Territorial Just Transition Plan and associated Programme was approved by Cabinet and the European Commission (EC) in November 2022. It incorporates €84.5 million of funding from the EU Just Transition Fund for 2021-2027, and the Programme will provide for investments of up to €169 million, which will be targeted at the economic transition of the Midlands region for the period to 2027, under Ireland's</p>

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		first such territorial plan, the Just Transition Plan for the Midland's Region; this plan sets out the impacts on this region as a result of the ending of peat extraction for energy production and identifies the development needs and priorities for the territory in order to address these impacts.
	Energy Efficiency Directive (2012/27/EC) and revised Energy Efficiency Directive (EU) 2018/2002	<p>Under the Energy Efficiency Directive:</p> <ul style="list-style-type: none"> • EU countries make energy efficient renovations to at least 3% of buildings owned and occupied by central government; • EU governments should only purchase buildings which are highly energy efficient; and • EU countries must draw-up long-term national building renovation strategies which can be included in their National Energy Efficiency Action Plans. <p>The revised directive sets a target of at least 32.5% for energy efficiency at EU-wide level.</p>
	EU Climate Adaptation Strategy 2021	The European Commission adopted its new EU strategy on adaptation to climate change on 24 February 2021. The new strategy sets out how the European Union can adapt to the unavoidable impacts of climate change and become climate resilient by 2050. The Strategy has four principle objectives: to make adaptation smarter, swifter and more systemic, and to step up international action on adaptation to climate change.
	Fit for 55 Package	<p>The Fit for 55 Package comprises a set of proposals to revise and update EU legislation and includes for new initiatives with the overall aim of ensuring that EU policies are in line with the Council and the European Parliament's climate goals of reducing net GHG emissions by at least 55% by 2030. It includes for an update to the Emissions Trading Scheme (ETS) with new provisions such as extension to cover maritime emissions and a revision of rules applying to the aviation sector. The changes to the EU ETS have now been agreed under Directive 2023/959 (amending Directive 2003/87/EC and Decision (EU) 2015/1814) and were to be implemented in national regulation by December 31, 2023, at the latest.</p> <p>The Package also includes for a suite of new rules, revisions and targets across many aspects, including: a social justice fund; a carbon border adjustment mechanism; new rules to increase the EU-level GHG emissions reduction target for 2030 from 29% to 40%; a binding EU commitment to reduce emissions and increase removals from LULUCF with binding national targets for each Member State; CO₂ emissions standards for vans and cars; reducing methane emissions in the energy sector; a provisional agreement on sustainable aviation fuels; a provisional deal on new rules for decarbonised fuels in shipping; new rules under the Alternative Fuels Infrastructure Regulation (AFIR); revision of the RED (RED III); new rules to accelerate energy efficiency and the energy performance of buildings; a hydrogen and decarbonised gas market package; and a proposal to revise the directive on the taxation of energy products and electricity.</p>
	REPowerEU Plan	The REPowerEU Plan is focused on rapidly reducing the European Union's reliance on Russian fossil fuels by progressing the clean energy transition and fostering increased collaboration throughout and across Member States to create a more resilient European energy system. REPowerEU expands the 'Fit for 55' proposals by setting forward additional actions to save energy by reducing demand and consumption, diversify energy sources and supplies, accelerate fossil fuel substitution, and improve investment frameworks facilitating reforms, faster permitting, and innovation.
Landscape	European Landscape Convention (Florence, 2000)	The Convention's purpose is to promote landscape protection, management and planning of European landscapes and to organise European co-operation on landscape issues. It is the first international treaty to be exclusively concerned with protection, management and enhancement of European landscape. It is extremely wide in scope: the Convention applies to the Parties' entire territory and covers natural, rural, urban and rural-

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		<p>urban transitional areas, also including land, inland water and marine areas. The Convention covers every-day or degraded landscapes as well as those that can be considered outstanding i.e. recognition of the importance of all landscape types.</p> <p>The Convention incorporates a number of measures which are to be undertaken to put into effect at national level General Measures, including:</p> <ul style="list-style-type: none"> • To recognise landscapes in law as being an essential component of people's surroundings; • The establishment and implementation of policies which aim to protect landscapes, and to inform landscape management and planning considerations; • To better incorporate the public, local and regional authorities as well as other organisations in defining and implementing landscape policies; and • The integration of landscape into local and regional planning policies that have possible direct or indirect impacts on the landscape.
	Convention for the Protection of the Archaeological Heritage of Europe (revised) (Valletta, 1992)	Objective is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.
	Convention for the Protection of the Architectural Heritage of Europe (Granada, 1985)	Objectives seek to provide a basis for protection of architectural heritage and are a means for proclaiming conservation principles, including a definition of what is meant by architectural heritage, such as monuments, groups of buildings and sites. The Convention also seeks to define a European standard of protection for architectural heritage and to create legal obligations that the signatories undertake to implement.
Land Use	Indirect Land Use Change (ILUC) Directive (EU) 2015/1513	The Indirect Land Use Change (ILUC) Directive (EU) 2015/1513 amends certain provisions of the Renewable Energy Directive and the Fuel Quantity Directive, and introduced rules in 2015 in order to help lower the risk of causing indirect land use changes while also facilitating the greater use of biocrops. The amendments include for an initial capping the contribution of biofuels produced from 'food' crops on agricultural land at 7%, placing a greater emphasis on the production of advanced biofuels from waste feedstocks, as well as more incentives to encourage biofuels produced in new installations to produce 60% less greenhouse gas emissions than fossil fuels, and stronger incentives to encourage renewable electricity use in the transport sector.
	Land Use, Land Use Change and Forestry (LULUCF) Regulations (EU) 2018/841	The Land Use, Land Use Change and Forestry (LULUCF) Regulations (EU) 2018/841 (inclusion of greenhouse gas emissions and removals from the LULUCF sector in the 2030 climate and energy framework) requires all Member States adhere to the 'no-debit' rule over two five- year periods, and envisages efforts to increase the LULUCF carbon sink from 2030 onwards. It introduced accounting obligations for all types of land use from 2021 onwards; for wetlands, these obligations arise from 2026 onwards. The LULUCF Regulation was revised in 2023 for the period up to 2030. To help reach climate neutrality, for the first time, the revised LULUCF regulation has a separate land-based net carbon removals target of 310 million tonnes of CO ₂ equivalent by 2030.
	EU Soil Strategy for 2030	Currently, there is no EU-wide legislation specifically on soil, however under the EU biodiversity strategy for 2030, the EU Commission have developed a soil strategy with the aim of having all EU soil ecosystems in a

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healthy condition by 2050 (currently the Commission estimate 60% of soils are in an unhealthy state). The EU Soil Strategy for 2030 sets out a framework and concrete measures to protect and restore soils, and ensure that they are used sustainably. It sets a vision and objectives to achieve healthy soils by 2050, with concrete actions by 2030. To achieve this objective, the Commission has tabled a Soil Monitoring and Resilience Directive, laying down measures for monitoring and assessing soil health. Under the EU's Biodiversity Strategy for 2030, the issue of land take is also identified as being a major threat to biodiversity, and the EU's Soil Strategy for 2030 sets out an aim for "no net land take by 2050".

Review of National Level Plans and Programmes

Topic	Title	Summary of Objectives: National
Biodiversity	4 th National Biodiversity Action Plan 2023 - 2027	Ireland's fourth iteration of the BAP for conserving and restoring Ireland's biodiversity covers the period 2023 – 2027. It reinstates the vision for biodiversity as- ' <i>Biodiversity in Ireland is valued, conserved, restored and sustainably used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people</i> '. It sets out five objectives to help tackle issues related to biodiversity in Ireland.
	Wildlife Acts 1976 – 2012 (as amended)	The purpose of the Wildlife Acts 1976-2010 is to provide for the protection of wildlife (both flora and fauna) and the control of activities, which may impact adversely on the conservation of wildlife.
	Flora Protection Order 2015 (Amended in 2022)	Objectives are to protect listed flora and their habitats from alteration, damage or interference in any way. This protection applies wherever the plants are found and is not confined to sites designated for nature conservation.
	European Communities (Natural Habitats) Regulations, SI 94/1997, as amended S.I. 233/1998 and S.I. 378/2005	These Regulations give effect to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and the Minister to designate special areas of conservation (endangered species and habitats of endangered species) as a contribution to an EU Community network to be known as NATURA 2000. See EU Habitats Directive.
	All Ireland Pollinator Plan 2021-2025	Ireland has developed a strategy to address pollinator decline and protect pollinator service. A total of 186 actions have been proposed across six objectives. It is about raising awareness about pollinators and how to protect them.
	Quality of Salmonid Waters Regulations 1988 (S.I. 293/1988)	Prescribe quality standards for salmonid waters and designate the waters to which they apply, together with the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. They gave effect to Council Directive No. 78/659/EEC on the quality of fresh waters needing protection or improvement in order to support fish life. These regulations are repealed, having been superseded by the WFD (see entry on the WFD). However the legal status of these regulations at national level remains unclear, as the Irish Statute Book continues to list them as 'not affected' rather than 'revoked'. Note these regulations specify which water bodies are designated as Salmonid Rivers.
	NPWS Conservation Plans for SACs and SPAs and NHAs	The NPWS produces a draft conservation plan for each SAC, SPA and NHA. Each plan lists the wildlife resources of the area, the current human uses, any conflicts between the two, and strategies for retaining the conservation value. These documents are made available on the NPWS website and to interested parties for a consultation period, following which the final version of the conservation plan is completed. It is intended that plans will be reviewed every

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5 years. It is expected that these plans will be consulted/referenced during the preparation of farm management plans for holdings within and nearby the nature conservation site.

National Peatland Strategy (DAHG, 2015) and National Peatlands Strategy Progress Report 2017 (DCHG, 2018)	In April 2011 the Government made a number of key decisions relating to the conservation and management of Ireland's peatlands, particularly those sites nominated for designation as Special Areas of Conservation and Natural Heritage Areas. A commitment was made to draw up a national strategy on peatlands conservation and management, in consultation with bog owners and other stakeholders, to deal with long-term issues such as land management & development, restoration, conservation, tourism potential, carbon accounting and community participation in managing this resource. In order to ensure that actions are implemented, the Peatlands Strategy Implementation Group (PSIG) was established, which comprises a cross-departmental group to monitor the strategy's implementation. The group published its progress report in August 2018.
Review of Raised Bog Natural Heritage Area Network (NPWS, 2014)	In 2014, following approval by Government, the Minister for Arts, Heritage and the Gaeltacht, published three documents, a National Peatlands Strategy, a National Raised Bog Special Areas of Conservation (SAC) Management Plan and a Review of Raised Bog Natural Heritage Areas (NHAs).
National Raised Bog Special Areas of Conservation Management Plan 2017-2022	These documents set out a strategic, long term vision for the future use and management of Ireland's peatlands including specific measures for the protection of sites designated for the protection of endangered bog habitats.
Peatland Restoration Plan (Bord na Móna, 2020)	This plan involves an investment of €115 million and intends to secure a store of over 100m tonnes of carbon and capture millions of tonnes more in the coming years.
European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011)	The Birds Directive was transposed into Irish law under the Birds and Habitats Regulations S.I. 477/2011 (as amended).
Marine Fisheries Natura Plans & Declarations made under European Union (Birds and Natural Habitats) (Sea-fisheries) Regulations 2013, as amended	Sea-fisheries are in Natura 2000 areas are regulated in accordance with: <ul style="list-style-type: none"> • The European Communities (Birds and natural Habitats) Regulations 2011 (S.I. 477/2011); and • The European Union (Birds and Natural Habitats) (Sea-fisheries) Regulations 2013 (S.I. 290/2013). <p>These two sets of Regulations transpose into Irish law the obligations on the Minister with regard to sea-fisheries arising from the EU Habitats and Birds Directives. Regulation 27 of SI 477 of 2011 places legal obligations on the Minister for Agriculture Food and the Marine in relation to his functions. These obligations transpose article 6.2 of the Habitats Directive and in short require the Minister to manage sea-fisheries to ensure that significant impacts on designated habitats and species are avoided.</p> <p>Regulation 42 of S.I. 477/2011 places legal obligations on the Minister for Agriculture Food and the Marine in consenting to or adopting a plan or project that may have significant impacts on a Natura 2000 site. These obligations transpose article 6.3 of the Habitats Directive. In short, the Minister is required to conduct a screening for appropriate assessment before consenting to or adopting the plan or project. On the basis of that screening assessment, the Minister must determine if an appropriate assessment is required. He must conclude that it is required where he cannot exclude significant impacts based on objective scientific information. The Minister may only consent to a plan or project or adopt or implement the plan or project where he has determined that it will not affect the integrity of the Natura 2000 site.</p>

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	Marine Strategy Framework Directive (MSFD) Programme of Measures	At national level, Ireland has developed an MSFD Programme of Measures that aims to meet the targets set in order to achieve or maintain Good Environmental Status.
Population/ Human Health	Healthy Ireland – a Framework for Improved Health and Wellbeing 2015-2025	The main aims of Healthy Ireland are: to increase the numbers of people experiencing good health (mental and physical) at all life stages; reduce health inequalities with a focus on social factors; protect the public and increase preparedness for threats to public health; and to encourage every individual and society as a whole to collaboratively engage with its own health and wellbeing. The first Implementation Plan has been published covering 2015-2017.
	Ireland's National Action Plan for Antimicrobial Resistance 2017-2020 (iNAP)	iNAP aims to implement policies and actions and to prevent, monitor and combat AMR across the health, agricultural and environmental sector by reducing the inappropriate use of antimicrobial medicines, as well as preventing the transmission of infections and disease. In order to reduce the spread of infection and disease, iNAP identifies implementing the NHWMP priorities as part of its strategic objectives.
	National Age Friendly Ireland Programme	The National Age Friendly Ireland Programme sets out a range of policy supports, including the provision of walkable streets, housing and transportation options, providing access to key services as well as opportunities for older people to participate in community activities. The programme is a shared service function of local government sector and provides a national centralised service to support the ongoing development, implementation and sustaining of the programme's national strategy.
	Climate Action and Low Carbon Development Act 2015	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; to establish a body to be known in the Irish language as <i>An Chomhairle Chomhairleach um Athrú Aeráide</i> or, in the English language, as the Climate Change Advisory Council; and to provide for matters connected therewith.
	Climate Action and Low Carbon Development (Amendment) Act 2021	The Act amends the Climate Action and Low Carbon Development Act 2015 in order to strengthen the governance framework on climate action by the State.
	Climate Action Plan 2024 (CAP24)	The CAP24 is the latest update of the CAP, building upon the measures and actions of CAP23. The CAP24 outlines the actions required to 2035 and beyond to achieve the ambition of halving Ireland's GHG emissions by the end of the decade and aiming for carbon neutrality by 2050.
	EirGrid's Strategy 2020-2025	EirGrid's Strategy 2020-2025 is a strategy which is predominantly shaped by climate change and the transition of the electricity sector to low-carbon, renewable energy generation and transmission. The main aim of this strategy is to transform the power system for future generations by phasing out coal, peat and oil-based generation in the next decade and implementing new technologies that will allow the consumers to generate and store power, and return any surplus to the grid.
	Energy Security in Ireland to 2030	Energy Security in Ireland to 2030 outlines a new strategy to ensure energy security in Ireland for this decade, while ensuring a sustainable transition to a carbon neutral energy system by 2050. This energy security package sets out a strategic approach to ensure a secure transition for Ireland's energy systems in line with its climate objectives. It considers lessons, in particular, from the disruption to European energy supplies following the invasion of Ukraine and the domestic capacity shortfall experienced in the electricity sector. Six key pillars of analysis underpin the overall response and recommendations which are presented in Energy Security in Ireland to 2030, including a public consultation, and a range of external reviews and analyses which are published alongside the Energy Security Package. A follow-up to the Energy Security Package will be published in 2030, and every five years thereafter, with implementation monitored by the Government's Energy Security Group.

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Long-term Strategy on Greenhouse Gas Emissions Reductions	The Long-term Strategy on Greenhouse Gas Emissions Reductions was published in July 2023 as part of the actions proposed under CAP23 and as a requirement under the Climate Action and Low Carbon Development (Amendment) Act 2021. This strategy sets out indicative pathways, beyond 2030, towards achieving carbon neutrality for Ireland by 2050. A long-term strategy is also a requirement of the Regulation on the governance of the energy union and climate action (EU) 2018/1999.
National Adaptation Framework (NAF)	First published in 2018, the National Adaptation Framework (NAF) contained Ireland's strategy for the application of climate adaptation measures to reduce the vulnerability of the State to the negative effects of climate change, and to seek opportunities for any positive effects that may occur. The NAF was reviewed in line with the requirements of the Climate Action and Low Carbon Development Act 2015-2021 and a new NAF was adopted and published in June 2024.
National Retrofit Plan	The National Retrofit Plan was first published as a part of the Climate Action Plan 2021, setting out how the government will deliver on retrofit targets. The plan is designed to address barriers to retrofit across four key pillars: driving demand and activity; financing and funding; supply chain, skills and standards; and governance. For each pillar, barriers were identified and time-bound policies, measures and actions were put in place to address them.
Grid Implementation Plan 2023-2028 for the Electricity Transmission System in Ireland (New plan in preparation by EirGrid)	The Grid Implementation Plan 2023-2028 will be the third Implementation Plan, which will sit under EirGrid's Shaping Our Electricity Future Roadmap 2030. The Implementation Plan identifies the best current understanding of those parts of the transmission system that are envisaged as likely to be developed over the next five years and identifies the issues, policies and objectives that will be addressed in developing the Grid.
Offshore Renewable Energy Development Plan I	<p>The Offshore Renewable Energy Development Plan (ORED P) identifies the opportunity for the following:</p> <ul style="list-style-type: none"> The sustainable development of Ireland's abundant offshore renewable energy resources To increase indigenous production of renewable electricity To contribute to reductions in our greenhouse gas emissions To improve the security of our energy supply Creating jobs in the green economy <p>The ORED P sets out key principles, policy actions and enablers for delivery of Ireland's significant potential in this area. In this way, the ORED P provides a framework for the sustainable development of Ireland's offshore renewable energy resources.</p>
Offshore Renewable Energy development Plan II (in draft by DECC)	<p>ORED P II updates ORED P I which was published in 2014 and which set out key principles, actions and enablers needed to harness offshore renewable energy. ORED P II takes account of significant developments in policy, legislation and regulation and the availability of additional marine data since the publication of ORED P I.</p> <p>ORED P II is being brought forward as part of the development and implementation of a new integrated forward planning framework off for Marine Planning for/in Ireland. It is intended to provide the evidence base to support the identification of areas most suitable for the sustainable development of offshore renewable energy in Ireland's maritime area, which will happen at later stages in the planning framework</p>
National Energy and Climate Plan 2019-2030 (in draft by DECC, 2024)	The Governance of the Energy Union and Climate Action Regulation requires Member States to develop National Energy and Climate Plans (NECPs). A draft Plan was submitted to the European Commission in December 2018. In accordance with the Regulation, the European Commission will engage in an iterative process with Ireland and will provide feedback by 30th June 2019, prior to the finalisation of the NECPs by 31st December 2019. A mid-term review was required by the EC and subsequently Ireland has produced an updated NECP 2021-2030. The aim of the

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NECP is to provide an integrated policy framework for the period up to 2030 to ensure regulatory certainty and a coordinated approach among Member States

National Policy Position on Climate Action and Low-Carbon Development (2014)	The National Policy Position establishes the fundamental national objective of achieving transition to a competitive, low carbon, climate-resilient and environmentally economy by 2050. It sets out the context for the objective, clarifies the level of GHG mitigation ambition envisaged and establishes the process to pursue and achieve the overall objective.
Sectoral Climate Change Adaptation Plans	Twelve Sectoral Climate Change Adaptation Plans were published between 2019 and 2020 in line with the first NAT and Climate Action Plan 2019. These sectoral plans identified the key risks faced across sectors including agriculture, biodiversity, built and archaeological heritage, transport infrastructure, electricity and gas networks, communications, flood risk management, water quality and services infrastructure and health. The plans detail the approach being taken to address these risks and build climate resilience for the future. The next iteration of the Sectoral Adaptation Plans will need to be reviewed and developed in line with the new NAF 2024.
Sectoral Planning Guidelines for Climate Change Adaptation (2018)	These guidelines have been developed for, and are primarily intended for the use of, the sectors required to prepare statutory sectoral adaptations under the National Adaptation Framework (NAF). The guidelines aim to ensure that a coherent and consistent approach to adaptation planning is adopted by the key sectors in Ireland. Sectors preparing sectoral adaptation plans under the NAF are required to prepare their plans in line with the process described in these guidelines while also being aware of the overall requirements regarding the development of sectoral adaptation plans in Sections 5, 6 and 7 of the Climate Action and Low Carbon Development Act 2015 and the NAF (particularly Chapters 3 and 4).
Transmission Development Plan 2021-2030	Transmission and distribution of electricity impacts energy efficiency resulting in a percentage of lost power. Producing renewable electricity can be more advantageous if the retention of that energy is sustained as much as possible over various distances. These challenges can be attenuated by grid upgrades. EirGrid's Transmission Development Plan 2021-2030 builds on their preceding policy, the Grid Implementation Plan 2017-2022. Both of which support the continued development of a safe secure and reliable transmission system in Ireland and identifies, at a strategic level, key developments in the transmission system to take place over the next few years and highlights. One of its key strategy statements to ensure a balanced approach to grid development is consideration of all practical technology options.
Agriculture, Forest and Seafood Climate Change Sectoral Adaptation Plan (DAFM, 2019)	This adaptation plan sets out the projected changes in climate focusing on those identified as most likely to impact the agriculture, forest and seafood sector. It identifies a list of priority risks and possible consequences, and highlights a number of case studies identifying how the sector has and will continue to be impacted by changing weather patterns and steps towards building resilience. The four overarching objectives of the adaptation plan are to; Ensure a joined up approach to adaptation planning in the Department of Agriculture, Food and the Marine Raise awareness of the impacts of climate change in the agriculture, forest and seafood sector Reduce vulnerability of the agriculture, forest and seafood sector to main climate impacts and seek to increase resilience Embed adaptation planning in agriculture, forest and seafood sectoral policies
Biodiversity Climate Change Sectoral Adaptation Plan (DCHG, 2019)	This five-year adaptation plan sets out actions aimed at improving sustainable agriculture and fisheries, better soil and land management and, most urgently, the restoration of natural systems. The plan also emphasises the need to consider biodiversity as an adaptation tool for other sectors.

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	Public Sector Energy Efficiency Strategy (DCCAE, 2017)	This strategy was implemented to ensure the public sector fully realises its targets in relation to energy efficiency. It fulfils the commitments made in Ireland's third NEEAP.
Planning	Ireland 2040: The National Development Plan 2018-2027	The NDP sets out the investment priorities to underpin implementation of the NPF through a total investment of approx. €116 billion.
	Ireland 2040 Our Plan: The National Planning Framework	The new framework document will be the successor to the National Spatial Strategy 2002 (NSS) and will be known as the National Planning Framework (NPF). The National Planning Framework will be the long-term, 20 year strategy for the spatial development of Ireland that will promote a better quality of life for all, with sustainable economic growth and an environment of the highest quality as key underlying principles.
	National Marine Planning Framework (June, 2021)	The NMPF is a single plan covering all marine activities which reflects the need for a coherent strategic vision for marine planning in Ireland. The planning framework is a long-term strategy for the next 20 years which sets the groundwork for the development of the marine waters surrounding Ireland. The starting point for the strategy is to lay the groundwork for a better quality of life for all and a basis for sustainable economic growth. It is intended that the NMPF will both provide a strong focus to guide and inform integrated investment decisions. The NMPF addresses both opportunities and challenges to deliver policy directions across a broad spectrum.
	Marine Planning Policy Statement (MPPS) (DHPLG, 2019)	<p>The MPPS was introduced on a non-statutory basis, pending the introduction of legislation in 2020 that provides for the preparation, adoption and review of statutory marine planning policy statements on 6-yearly cycles. It applies to all facets of marine planning and is intended to;</p> <p>Describe the existing components of Ireland's marine planning system;</p> <p>Outline a vision for the future development of our marine planning system;</p> <p>Set out the overarching policies and principles the Government expects marine planning bodies and other public bodies that engage with the marine planning system to observe (in terms, for example, of public engagement, transparency, governance, environmental assessment, climate action, social and economic benefit);</p> <p>Set out high-level priorities for the enhancement of the marine planning system in Ireland.</p>
	Capital Investment Plan (CIP) 2020-2024	The five-year Capital Investment Plan (CIP) 2020-2024 from Irish Water was prepared for water and wastewater assets and infrastructure to 2024. The primary aim of this plan is to provide clean drinking water to customers and to treat and return wastewater safely to the environment. The provision of the water services ensures sustainable economic growth, protecting both the environment and the health and safety of the people. Irish Water adopted the National Water Resources Plan in 2022. This is a 25-year strategy plan which will be supported by four regional plans in due course. This plan sets out the approach and multi-criteria objectives which have been used to identify water management solutions at the national to regional level. The approach is focused on the principle of 'use less, lose less and supply smarter'. The assessment methodology has integrated environmental criteria including water quality and resource use.
	The Planning and Development Act 2000 (as amended) Planning and Development Bill 2023 [under preparation]	<p>Under this Act the County Councils are required to compile and maintain a Record of Protected Structures (RPS) in their Development Plans. Sites included in the RPS are awarded automatic protection and may not be demolished or materially altered without grant of permission under the Planning Acts.</p> <p>A proposed Planning and Development Bill 2023 is under preparation which when enacted will introduce a new planning policy hierarchy paving the way for a new national planning policy statement to set policy and provide guidance related to planning matters.</p>

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	Planning and Development (Strategic Infrastructure) Act 2006	An act to provide for the making directly to An Bord Pleanála of applications for planning permission in respect of developments of strategic importance to the State.
	Planning for Watercourses in the Urban Environment - Guidelines (IFI, 2020)	This guideline document outlines an integrated watercourse protection strategy, developed by Inland Fisheries Ireland through consultation with a wide range of experts in the area. It sets out guidelines for the protection of watercourses through the use of buffer zones, sustainable drainage systems, instream rehabilitation, climate and flood risk and recreational planning.
	The Planning System and Flood Risk Management Guidelines (DHPCLG, 2009)	The flood risk guidelines were issued under Section 28 of the Planning and Development Act 2000 (as amended), and sets out that development plans and local area plans, must establish the flood risk assessment requirements for their functional area. Flood risk assessment is required by planning authorities to be an integral and leading element of their development planning functions. The guidelines are specifically aimed at linking planning and development with flood protection and flood risk assessment and recommend a clear and transparent assessment of flood risk at all stages in the planning process. It is a requirement of the guidelines that Plans and all future planning decisions have regard to the guidelines.
	Environmental Protection Agency Act 1992	An Act to make further and better provision for the protection of the environment and the control of pollution, to establish an Environmental Protection Agency, for these and other purposes to increase certain existing monetary penalties and to provide for other matters connected with the matters aforesaid.
Sustainable Development	The Protection of the Environment Act 2003	Act implementing Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control and certain other Acts adopted by the institutions of the European Communities. Amends the Environmental Protection Agency Act 1992, Waste Management Act 1996, and Litter Pollution Act 1997.
	Ireland's Second National Implementation Plan for the Sustainable Development Goals 2022-2024 (DECC, 2022)	<p>This plan was published as a direct response to the 2030 Agenda for Sustainable Development. It aims to provide a framework for how Ireland will implement the 17 Sustainable Development Goals (SDGs), to support national policies which contribute to meeting the Goals, and to facilitate multi-stakeholder participation. The plan identifies four strategic priorities to guide implementation;</p> <p>awareness: raise public awareness of the SDGs</p> <p>participation: provide stakeholders opportunities to engage and contribute to follow-up and review processes, and further develop national implementation of the Goals</p> <p>support: encourage and support efforts of communities and organisations to contribute towards meeting the SDGs, and foster public participation</p> <p>policy alignment: develop alignment of national policy with the SDGs and identify opportunities for policy coherence</p>
	Programme for Government: Our Shared Future (2020)	This five-year plan sets out commitments and measures under a variety of policy headings, covering topics such as economy, climate, health, housing and education. The programme contains a lengthy mission statement in favour of a “Green New Deal” as Ireland are committed to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030, which is a 51% reduction over the decade, with the aim of achieving net zero emissions by 2050.
	Environmental Liability Regulations, S.I. 547/2008	These Regulations (SI 547 of 2008) transpose EU Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage.
	Environmental Liability Regulations (Amendments), (S.I. No. 293 of 2015)	

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Our Rural Future: Rural Development Policy 2021-2025	Our Rural Future: Rural Development Policy 2021-2025 represents the Irish Government's blueprint for a post-COVID-19 recovery and development of rural Ireland over the period of 2021-2025. It provides the framework to achieve the vision of transforming the quality of life and opportunity for people living in rural areas. The vision of this policy is for a thriving rural Ireland which is integral to our national economic, social, cultural and environmental wellbeing and development.
Green Procurement Guidance for the Public Sector (EPA, 2021)	The EPA produced guidance to help inform public bodies by giving a practical overview across ten priority sectors of green procurement issues. It includes best practice and examples, along with the key environmental impacts to be considered in procurement and how the guidance criteria can address these.
Ireland's Seafood Development Programme 2021-2027	The new operational programme for the sustainable development of the seafood sector is currently in preparation. The programme will be developed in the context of the proposed EU Regulation on a European Maritime, Fisheries and Aquaculture Fund (EMFAF). Initial public consultation with stakeholders and other interested parties was carried out January 2020.
National Strategic Plan for Sustainable Aquaculture Development 2030	The National strategic Plan for Sustainable Aquaculture Development 2030 seeks to ensure that the recently updated but non-binding guidance for the sustainable development of EU aquaculture (2021 – 2030) is mainstreamed into national aquaculture sector planning. It will help inform the investment priorities for aquaculture in Ireland's new European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027 (Seafood Development Programme). It will also ensure that strategic planning for the aquaculture sector in Ireland responds to the latest thinking in terms of the strengths, weaknesses, opportunities, and threats for Irish aquaculture in order to promote the development of a sustainable and forward-looking sector.
National Policy Statement on the Bioeconomy 2018	This document sets out a vision, common principles, strategic objectives, and a framework for implementation to deliver on this vision for the bioeconomy in Ireland. It proposes a summary of the key actions needed to expand the bioeconomy.
National Bioeconomy Action Plan	Ireland's first national Bioeconomy Action Plan was published during Bioeconomy Ireland Week 2023. The 'Bioeconomy Action Plan 2023-2025' includes 33 actions to accelerate support for the development of the bioeconomy. The plan has a high focus on bringing sustainable scientific practices, technologies and biobased innovation and solutions into use on farms and by biobased industries in Ireland.
European Communities (Environmental Assessment of Certain Plans and Programmes Regulations 2004, (S.I. 435 of 2004) as amended by S.I. 200 of 2011	These regulations transpose the SEA Directive into Irish law, covering 'Other Plans and Programmes.'
Environmental Impact Assessment Regulations (S.I. 349/1989) (as amended)	The Regulations modify the provisions of the Local Government (Planning and Development) Acts, 1963 to 1983 so as to provide a framework for the application of Environmental Impact Assessment (EIA) to the planning control procedures under those Acts, and for the application of EIA to relevant development by local authorities. They also modify development consent procedures under 9 other enactments in light of the Directive's requirements, and they establish an EIA procedure for relevant development by State authorities. The Regulations specify, in the First and Second Schedules respectively, the development for which EIA will be required and the information which must be furnished in an environmental impact statement prepared in connection with proposed development

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Land Use	Common Agricultural Policy Strategic Plan 2023 - 2027	<p>This plan will underpin the sustainable development of Ireland's agriculture sector by:</p> <ul style="list-style-type: none"> • Supporting viable farm incomes and enhancing competitiveness • Contributing to the achievement of environmental and climate objectives at national and EU levels • Strengthening the socio-economic fabric of rural <p>In doing so, Ireland's CSP seeks not just to meet the three general and nine specific objectives set out in EU legislation, but also to contribute to meeting the objectives of the European Green Deal and the Farm to Fork and Biodiversity strategies.</p>
	FoodVision 2030 (DAFM)	<p>The Food Vision 2030 Strategy is a new ten year Strategy for the Irish agri-food sector (taken to include primary agriculture, food and drink processing and manufacturing, fisheries, aquaculture and fish processing, forestry and forestry processing and the equine sector). The Strategy has adopted four high level Missions for agri-food sector to work towards:</p> <ul style="list-style-type: none"> • A climate smart, environmentally sustainable agri-food sector • Viable and Resilient Primary Producers with enhanced wellbeing • Food which is safe, nutritious and appealing, trusted and valued at home and abroad <p>An innovative, competitive and resilient agri-food sector, driven by technology and talent</p>
	Food Wise 2025	<p>Food Wise is sets out the strategic plan for the development of the Irish agri-food sector over the next decade. Growth projections include increasing the value added in the agri-food, fisheries and wood products sector by 70% to in excess of €13 billion. Sustainable production at its core setting out a range of specific recommendations aimed at managing the projected growth in a sustainable way. There is a strong commitment to the measurement and monitoring of the sustainability credentials of the sector as the strategy rolls out.</p>
	National Biomethane Strategy	<p>A National Biomethane Strategy is being prepared, which will set out the objective of achieving 5.7 TWh of indigenous biomethane production by 2030. It is expected that the development of a national bioeconomy and anaerobic digestion along with agricultural diversification, will be the mechanisms for delivering on this ambitious target. It is estimated that this level of biomethane would offset approx. 10% of current national natural gas demand.</p>
	Business Area Unit (BAU) Strategic Forest Plans	<p>Coillte developed a BAU Strategic Forest Plans for BAU, which are reviewed every five years, set out a vision for the forests in each BAU and also outlines how Coillte policies and objectives will be implemented within them. The current plans cover the period of 2021-2025. These plans promote sustainability within the plans in relation forestry by focussing on objectives including wise use of natural and cultural resources; effective protection of the environment; sustainable supply of forest products (wood and non-wood); and working with communities.</p>
	Coillte Strategic Vision (2022)	<p>In April 2022, Coillte, Ireland's semi-state forestry company, announced their Coillte Strategic Vision (2022), which comprises a forestry strategic vision aiming to deliver multiple benefits from its forests and bring more focus to climate action, setting ambitious new targets on biodiversity and recreation, while continuing to deliver for the forest and wood products industry. The approach aims to sustainably balance and deliver the multiple benefits from Ireland's state forests across four strategic pillars: climate, wood, nature, and people. The Vision proposes a range of innovative actions designed to result in a total capture of approx. 28m tonnes of CO₂ from the environment by 2050 across these four pillars. As part of this vision the following actions are proposed amongst many others:</p> <ul style="list-style-type: none"> 100,000 hectares of new forests will be created by 2050 supporting the delivery of the national afforestation target; and create a carbon sink of 18 million tonnes of CO₂; 25 million m³ of Irish timber to be supplied in a sustainable manner; and

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204,000 hectares of Coillte's estate to be managed primarily for biodiversity by 2025.

	Ireland's Forest Strategy 2023-2030	The over-arching strategic objectives of the Forest Strategy are People, Planet and Prosperity. These objectives have been prioritised to develop an internationally competitive and sustainable forestry sector that provides a full range of economic, environmental and social benefits to society far into the future and which accords with the Forest Europe definition of sustainable forest management.
	Forest Strategy Implementation Plan	The Forest Strategy Implementation Plan is a comprehensive, ambitious, and long-term plan to protect and enhance Ireland's Forests. Ireland is fully committed to realizing the important role that forests and the forest-based sector must play in the transition to a sustainable, green, climate neutral and competitive circular bioeconomy. Goals of this plan include fostering a shared vision where trees and forests are seen as a symbol of the transformational changes; harnessing forestry to deliver a greater range of ecosystem services and nature protection; and promotion of timber will be the material of choice for new Irish homes.
	Forestry Programme 2023-2027	The Forestry Programme 2023-2027 is a €1.3 billion investment by the government in Irish forestry for the next five years from 2023-2027 which required State aid approval by the Commission. The new Programme provides for increased premiums for planting trees of up to €1,142 per hectare depending on the forest type, as well as extending the premium period from 15 to 20 years for farmers. Others will receive premiums for 15 years. It offers a broad range of planting options, and the rates are 46%-66% higher than the previous Forestry Programme.
Water/ Wastewater	Irish Water Capital Investment Programme 2017-2021	<p>Irish Water has published its Investment Programme covering the period 2017-2021. The estimate is that €13 billion is required to address known deficits. Investment priorities are set out for where improvements are needed urgently, and cover drinking water quality, leaks, water and wastewater compliance and availability and customer service. Irish Water's priorities as set out in the plan include the following:</p> <ul style="list-style-type: none"> • Eliminating Boil Water Notices in place for more than 200 days; • Reducing the number of schemes on the Remedial Action List to zero; • Compliance with lead in drinking water; • Reducing the volume of network leakage; • Rationalisation of water treatment works; • Improving compliance with the UWWTD; and • Eliminating raw sewage discharges from agglomerations.
	Water Services Policy Statement 2018–2025 (Irish Water, 2018)	<p>The statement clarifies the government's expectations for the delivery and development of water and wastewater services for the coming years, and will also inform decisions on rural water services. It represents the first Policy Statement prepared under the Water Services Act 2017. It outlines four principles:</p> <ul style="list-style-type: none"> • A single, publicly-owned, national water services authority; • Fair and efficient delivery with a customer focus; • Priority health and environmental quality outcomes across the sector; and • Ways of working to support partnership and excellent stakeholder engagement. <p>It also sets out three themes of high-level objectives comprising:</p>

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	<ul style="list-style-type: none"> • Quality; • Conservation; and • Future-proofing.
Irish Water Strategic Funding Plan (2019–2024)	<p>Under the Water Services Act 2017, Irish Water must prepare a Strategic Funding Plan (SFP) to the Minister within three months of the publication of the WSPS. This SFP covers the principles, themes and policy objectives identified in the WSPS and the strategic objectives outlined in the Water Services Strategic Plan. It outlines the operational and capital costs associated with the arrangements that Irish Water proposes to make and measures that it intends to take to implement the objectives of the WSSP. The strategic funding requirement is €11bn to 2024, comprised of a €6.1bn investment in infrastructure and assets and €4.9bn in operating costs. The funding model for Irish Water is set in context of the WFD, and the Water Services Policy Statement (WSPS) provides the framework within which the utility's funding and investment plans will be agreed.</p>
Draft Third Cycle River Basin Management Plan 2022-2027	The 3rd Cycle Plan is in preparation and will cover the period to 2027.
Flood Risk Management Climate Change Sectoral Adaptation Plan (2019)	The Flood Risk Management Climate Change Sectoral Adaptation Plan (2019) sets out a long-term goal for adaptation in flood risk management, along with a set of objectives and adaptation actions aimed at achieving those objectives. The long-term goal adopted by the OPW on climate adaptation for flooding and flood risk management is: Promoting sustainable communities and supporting our environment through the effective management of the potential impacts of climate change on flooding and flood risk.
National Water Resource Plan (NWRP) Framework	<p>The NWRP Framework identifies a roadmap for supplying a safe, sustainable, secure and reliable water supply to Uisce Éireann customers. This plan sets out a framework to better balance the supply and demand over a 25 year period. This plan is underpinned by three pillars including:</p> <ul style="list-style-type: none"> Lose less water (this will be achieved through reducing water leakage across the network). Use less water (this will be achieved through improved water efficiencies). Supply smarter (this will be achieved through improving existing Uisce Éireann infrastructure). <p>This plan has been adopted by Uisce Éireann on the 26th May 2021.</p>
Water Services Strategic Plan (Irish Water, 2015)	Irish Water has prepared a Water Services Strategic Plan (WSSP), under Section 33 of the Water Service No. 2 Act of 2013 to address the delivery of strategic objectives which will contribute towards improved water quality and WFD requirements. The WSSP forms the highest tier of asset management plans (Tier 1) which Irish Water prepare and it sets the overarching framework for subsequent detailed implementation plans (Tier 2) and water services projects (Tier 3).
Lead in Drinking Water Mitigation Plan (Irish Water, 2015)	<p>Irish Water has developed and implemented a Lead Strategy which aims to reduce the potential for dissolved lead from pipework to enter drinking water to and to replace public lead water mains over a ten year period.</p> <p>This will involve dosing public water supplies with orthophosphate. Orthophosphate works as a corrosion inhibitor by converting some of the lead carbonate to lead phosphate, forming a protective coating inside lead pipes, reducing corrosion which is a contributor of lead to the water supply.</p>
National Wastewater Sludge Management Plan (Irish Water, 2016)	The National Waste Water Sludge Management Plan (NWSMP) was prepared in 2016, outlining the measures needed to improve the management of wastewater sludge. The plan was subject to both AA and SEA and included a number of mitigation measures which were identified in relation to transport of materials, land-spreading of sludge

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Revision to NWSMP [under preparation]	and additional education and research requirements. This plan does not specifically address domestic wastewater loads, only those relating to Irish Water facilities. An update to the NWSMP is currently being prepared by Uisce Éireann. A revision to NWSMP is under preparation.
EC (Control of Dangerous Substances in Aquaculture) Regulations 2008 (S.I. 466/2008)	These regulations give effect to the EU Dangerous Substances Directive 2006/11/EC in Irish Law. They also give further effect to the Habitats Directive 92/43/EEC and Water Framework Directive 2000/60/EC, so far as those Directives relate to the discharge of dangerous substances to the marine environment from aquaculture activities.
Waste Water Discharge (Authorisation) Regulations (S.I. 684/2007), as amended	This has been derived from the Dangerous Substances Directive 2006/11/EC, to address pollution caused by certain toxic substances that are discharged to the aquatic environment and to establish a framework for Community action in the field of water policy.
Urban Wastewater Treatment Regulations (S.I. 254/2001), as amended	The Urban Wastewater Treatment Directive was transposed into Irish law by the Urban Wastewater Treatment Regulations (S.I. 254/2001).
National Inspection Plan - Domestic Waste Water Treatment Systems (EPA & Local Authorities)	The EPA have put in place a National Inspection Plan with the relevant local authorities in order to enforce the regulations. The owner of a DWWTS is required to ensure that the effluent poses no risk to human health.
Domestic Waste Water Treatment Systems (Registration) Regulations 2012 (S.I. 220/2012), as amended	Households connected to a DWWTS must register their systems in line with the regulations. Systems are expected to meet basic standards in order to not cause a risk to human health or the environment. Inspections are carried out to identify treatment systems that do not meet this standard.
Water Services Acts 2007 and 2012 (Domestic Waste Water Treatment Systems) Regulations 2012 (S.I. 223/2012)	Standards that govern the operation and maintenance of domestic wastewater treatment systems.
Assessment and Management of Flood Risks Regulations (S.I. 122/2010)	The directive was transposed into Irish law by the European Communities (Assessment and Management of Flood Risks) Regulations (S.I. 122/2010). The Regulations set out the responsibilities of the OPW and other public bodies in the implementation of the Directive. With trends such as climate change and increased domestic and economic development in flood risk zones, this poses a threat of flooding in coastal and river basin areas.
Good Agricultural Practice for Protection of Waters Regulations 2014 (S.I. 31/2014), as amended	<p>These Regulations give effect to Ireland's Nitrates Action Programme, provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources and include measures such as-</p> <ul style="list-style-type: none"> • 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. <p>The Regulations give further effect to several EU Directives including Directives in relation to protection of waters against pollution from agricultural sources ('the Nitrates Directive'), dangerous substances in water, waste management, protection of groundwater, public participation in policy development and water policy (the Water Framework Directive).</p>
Ireland's Nitrates Action Programme (DAFM)	Ireland's first Nitrates Action Programme (NAP) came into operation in 2006 and gave effect to the Nitrates Directive. The NAP was given effect through a series of regulations, most recently the European Communities (Good

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	<p>Agricultural Practice for Protection of Waters) Regulations 2014 (S.I. No. 31 of 2014), known as the Nitrates Regulations.</p> <p>The aim of the NAP is to prevent pollution of surface waters and groundwater from agricultural sources and to protect and improve water quality. In accordance with the Nitrates Directive and Article 28 of the Good Agricultural Practice Regulations, the Minister for Housing, Planning and Local Government, in consultation with the Minister for Agriculture, Food and the Marine reviewed the NAP for the first time in 2010. Article 28 of the Nitrates Regulations, in line with the Nitrates Directive, requires a review of the NAP every four years. The current, Fifth NAP that covers 2022-2027 is currently undergoing an interim review.</p>
Drinking Water Regulations (S.I. 122/2014), as amended	The Drinking Water Regulations S.I. 122/2014 provides the EPA with supervisory powers for public water supplies.
Water Policy Regulations (S.I. 350/2014)	These Regulations provide for the establishment and composition of a Water Policy Advisory Committee and related procedural and ancillary matters. The Regulations also transfer certain local authority responsibilities provided for in the European Communities (Water Policy) Regulations 2003 to the Environmental Protection Agency and to the Minister for the Environment, Community and Local Government.
The Water Policy Regulations (S.I. 722/2003), Environmental Objectives (Surface Water) Regulations (S.I. 272/2009), as amended and Groundwater Regulations (S.I. 9/2010), as amended	<p>The Water Policy Regulations (S.I. 722/2003), Environmental Objectives (Surface Water) Regulations (S.I. 272/2009) and Groundwater Regulations (S.I. 9/2010) govern the shape of the WFD characterisation, monitoring and status assessment programmes in terms of assigning responsibilities for the monitoring of different water categories, determining the quality elements and undertaking the characterisation and classification assessments.</p> <p>The Surface Water Regulations institute a wide-ranging set of environmental standards for Irish surface waters. The Groundwater Regulations establish environmental objectives to be achieved in groundwater bodies and include groundwater quality standards and threshold values for the classification of groundwater and the protection of groundwater against pollution and deterioration in groundwater quality.</p>
Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 (S.I. 296/2009), as amended	The Regulations require the EPA, when classifying surface waters in accordance with the ecological objectives approach of the Water Framework Directive, to assign a status of 'less than good ecological status' where <i>Margaritifera</i> is found to be in unfavourable conservation status. This will trigger further actions as waters classified as less than good must be restored to at least good status within a prescribed timeframe.
Quality of Bathing Waters Regulations 1988 (S.I. 84/1988) as amended	These Regulations prescribe bathing water quality standards and the bathing areas to which they apply, together with the sampling programmes and the methods of analysis and inspection to be used by local authorities to determine compliance with the standards. The Regulations give effect to Council Directive No. 76/160/EEC of 8 December 1975 (O.J. No. L31/1,5 February 1976) concerning the quality of bathing water.
Blue Dot Catchments Programme	This programme was established as one of the key measures of the RBMP 2018-2021, to achieve the objectives of the EU Water Framework Directive. The programme specifically targets the maintenance and restoration of high-status water bodies and aims to address their decline in Ireland.
Dumping at Sea Act 1996 (No. 14 of 1996), as amended	An Act to make further provision to control dumping at sea, to give effect to the Convention for the Protection of the Marine Environment of the North-east Atlantic done at Paris on the 22 nd day of September, 1992, and for those purposes to repeal and re-enact with amendments the Dumping at Sea Act (1981) and to provide for related matters.
Foreshore Acts 1933-2014, as amended	The Foreshore Act 1933, as amended, requires 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

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	the Minister under the Foreshore Act. This Act has been amended on a number of occasions. The original Act and all subsequent amendments comprise a series of Acts called the Foreshore Acts 1933-2014.
Quality of Shellfish Waters Regulations 2006 (S.I. 268/2006), as amended	<p>The Shellfish Waters Directive was transposed into legislation in Ireland by the European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. 268/2006), which were subsequently amended by the European Communities (Quality of Shellfish Waters) (Amendment) Regulations 2009 (S.I. 55/2009) and subsequently by the Amendment (No 2) Regulations 2009 (S.I. 464/2009).</p> <p>It is noted that at EU level the Shellfish Directive was repealed with shellfish waters being afforded protection under the WFD. At national level, the Shellfish Regulations specifies which waters are designated as Shellfish Waters.</p>
Water Environment (Abstractions and Associated Impoundments) Act 2022	The Water Environment (Abstractions and Associated Impoundments) Act 2022 sets out a process for the registration, assessment and licensing of both surface water and groundwater abstractions. It aims to help Ireland meet the delivery of WFD objectives and to ensure that abstractions are sustainable and in line with the environmental goals.
Local Government (Water Pollution) Act 1977 (Water Quality Standards for Phosphorus) Regulations 1998 (S.I. 258/1998)	<p>These Regulations provide for specified improvements in water quality conditions in rivers and lakes based on phosphorus concentrations or related water quality classifications. The Regulations also provide for periodic reporting in relation to progress in implementing the requirements of the Regulations.</p> <p>These Regulations give effect to certain requirements arising under Council Directive 76/46/EC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.</p>
Marine Strategy Framework Regulations (S.I. 249/2011), as amended	The Marine Strategy Framework Directive (MSFD) was transposed onto Irish law under the Marine Strategy Framework Regulations S.I. 249/2011.
Designated Maritime Area Plans	Designated Maritime Area Plans (DMAP) are part of Ireland's new maritime consenting regime and will comprise portions of the maritime area that are designated for a specific use. DMAPs that are established for offshore renewable energy (ORE) will provide a systemic development of offshore wind potential for Ireland. DMAPs will determine the broad area where ORE projects can be developed and will act as a management plan for a specific area of our marine waters. The establishment of DMAPs will take place in line with Section 22 of the Maritime Area Planning Act 2021, according to an ecosystem-based approach, with full consideration for the protection of marine environment and biodiversity. The first DMAP proposal for ORE is under consultation. DMAPs for other maritime activities may also be put forward in the future.
Air	
Industrial Emissions Regulations (S.I. 138/2013)	These Regulations primarily amend the Environmental Protection Agency Act 1992 and the Waste Management Act 1996 to transpose Chapters II and VI of Directive 2010/75/EC of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast). The Regulations apply to the industrial emissions directive activities specified in the First Schedule to the Environmental Protection Agency Act 1992, as amended by these Regulations.
Air Quality Standards Regulations 2011 (S.I. 180/2011), as amended	These Regulations transpose the Directive on ambient air quality and cleaner air for Europe (CAFE) into Irish law. They introduce a limit value to PM _{2.5} in addition to the existing limit values for PM ₁₀ , nitrogen dioxide and oxides of nitrogen, sulphur dioxide, lead, ozone, carbon monoxide and benzene.
Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. 58/2009), as amended	The Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) was published in May 2008. It replaced the Framework Directive and the first, second and third Daughter Directives. The fourth Daughter Directive (2004/107/EC) will be included in CAFE at a later stage. The limit and target values for both Directives are outlined below. The CAFE Directive was transposed into Irish legislation by the Air Quality Standards Regulations 2011 (S.I.

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		180/2011). It replaces the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. 53/2004) and S.I. 33/1999. The fourth Daughter Directive was transposed into Irish legislation by the Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. 58/2009).
	Mercury Regulations 2018 (S.I. 533/2018)	These regulations transpose the EU Regulation 2017/852 on Mercury into Irish Law. These regulations seek to protect human health and the environment by laying down measures and conditions concerning the use and storage of and trade in mercury, mercury compounds and mixtures of mercury, and the manufacture and use of and trade in mercury-added products, and the management of mercury waste, in order to ensure a high level of protection of human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.
	Clean Air Strategy for Ireland (2023)	The Clean Air Strategy provides the high-level strategic policy framework necessary to identify and promote the integrated measures across government policy that are required to reduce air pollution and promote cleaner ambient air, while delivering on wider national objectives. It outlines how we will enhance and protect the quality of the air that we breathe and realise the full environmental and health benefits of cleaner air.
	Persistent Organic Pollutant Regulations 2020 (S.I. 146/2020)	These Regulations give statutory effect in Ireland to Regulation (EU) 2019/1021 on persistent organic pollutants (the EU POPs Regulation). The EC Regulation is intended to ensure coherent and effective implementation of the European Community's obligations under the 2001 Stockholm Convention on Persistent Organic Pollutants and the 1998 Protocol on Persistent Organic Pollutants to the 1979 UNECE Convention on Long-Range Transboundary Air Pollution.
	National Air Pollution Control Programme	The National Air Pollution Control Programme (NAPCP) (2021) outlines the pathway Ireland will follow to achieve compliance with its commitments under the National Emission Ceilings (NEC) Directive (2001/81/EC) and the revised NEC Directive (2016/2284/EU). It includes policy options, measures and actions across sectors but in particular in the residential, transport agricultural and energy sectors aimed at reducing emissions of the five NEC-specified air pollutants. The NEC Directive covers non-methane volatile organic carbons, fine particulate matter, sulphur dioxide, and nitrogen dioxide (NO ₂).
Landscape	National Landscape Strategy 2015-2025	Objectives are to provide a cross-sector approach at government level to plan and manage the landscape (rural and urban) alongside communities and stakeholders. An implementation programme is included in the Landscape Strategy and will take place over the duration of the strategy period. The key objectives of the strategy are: <ul style="list-style-type: none"> • To recognise landscapes in law; • The provision of a policy framework to put measures in place for the management and protection of landscape; • To develop a National Landscape Character Assessment through data-gathering and an evidence-based description of character assessment; • To develop landscape policies; • To increase awareness of the landscape and public consultation; and • To identify education and training needs.
Cultural Heritage	Heritage Ireland 2030 (DHLGH)	Heritage Ireland 2030 is to be Ireland's new national heritage plan. It will be a coherent, comprehensive and inspiring framework of values, principles, strategic priorities and actions to guide and inform the heritage sector over the next decade.

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Culture 2025	Culture 2025 is a Framework Policy to 2025 which sets the vision for the future of culture and the arts in Ireland and prioritises actions. It recognises the diverse and multi-faceted nature of culture in Ireland and the contribution of 'culture' to sense of self, national identity and the arts.
Government Policy on Architecture 2009-2015	<p>This paper addresses issues that have arisen in the years since the publication of the first policy on architecture by setting out a number of goals: emphasising sustainable development of the environment and urban design; the encouragement and support of high quality modern architecture; the incorporation of architectural heritage in a more holistic and integrated manner; and developing actions which respond to and promote awareness in these areas. This Policy in tandem with the government's policy 'Building Ireland's Smart Economy: A Framework for Sustainable Economic Renewal' sets out a number of priorities and actions that the Government will be taking in the short and medium term. Key elements include investment in research and development, a focus on co-ordinated 'forward planning' and investment in renewable energy together with the promotion of the green enterprise sector and the creation of jobs.</p> <p>This policy document is currently under review and is the subject of public consultation.</p>
Places for People – the National Policy on Architecture	Places for People – the National Policy on Architecture was published in 2022. It sets out various ways to promote and embed design quality in architecture and the built and natural environment in Ireland, and aims to boost engagement with the public regarding architecture. Places for People aims to boost public engagement with architecture as well as improve data and research on the built environment. It contains a suite of actions aiming to "create, sustain and regenerate local areas as vibrant, welcoming and sustainable places in which communities can flourish".
Framework and Principles for the Protection of Archaeological Heritage (1999)	The document sets out the basic principles of national policy regarding the protection of archaeological heritage. The document focuses particularly on the principles which should apply in respect of development and archaeological heritage.
Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023	The principle national legislation addressing built heritage is the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023. The Act replaces the existing National Monuments Act 1930 to 2014, and other related legislation. This new legislation underpins the protection of Ireland's historic heritage. It includes strengthened protection for archaeological finds, additional licensing requirements, provisions for ratification of a number of treaties including the UNESCO convention on protection of underwater archaeology.
National Monuments Acts (1930 to 2004)	Objectives seek to protect monuments of national importance by virtue of the historical, architectural, traditional, artistic or archaeological interest attaching to them and includes the site of the monument, the means of access to it and any land required to preserve the monument from injury or to preserve its amenities.
The Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999	Provides for the establishment of a National Inventory of Architectural Heritage (NIAH). The objective of the NIAH is to aid in the protection and conservation of the built heritage, especially by advising planning authorities on the inclusion of particular structures in the Record of Protected Structures (RPS).
Guidelines for Planning Authorities: Architectural Heritage Protection, 2004	The Planning and Development Act 2000 required additional development objectives relating to the protection of structures which are deemed to be of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest and to preserve the character of architectural conservation areas.
Archaeology 2025 Strategy: A Strategic Pathway for Ireland	The Archaeology 2025 Strategy: A Strategic Pathway for Ireland is an initiative of the Royal Irish Academy (RIA) and was launched by the Department of Culture, Heritage and the Gaeltacht in 2017. It sets out the long-term strategy for the practice and resource of archaeology in Ireland. Its vision is The promotion of archaeology in understanding the past and as a valuable resource shared by all. It includes six key pillars covering: Delivering archaeology; sustaining

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		practice; modernising legislation; expanding research horizons; developing education and skills; and maximising impact.
	Strategy for World Heritage in Ireland 2024 – 2034	A Strategy for World Heritage in Ireland 2024 – 2034 has been published for consultation. This Strategy commits to reviewing Ireland's approach to World Heritage, putting in place revised procedures for proper protection, conservation, management, interpretation, and presentation of Ireland's World Heritage Properties and Tentative List sites. There will be explicit provision for the protection of World Heritage sites, including, for the first time, a definition in Irish law for "World Heritage Property".
	Historic Towns Initiative (HTI) 2024	The HTI 2024 is a joint undertaking by the Department of Housing, Local Government and Heritage and the Heritage Council, and it supports the Town centre First' policy approach. It aims to promote heritage-led regeneration of Ireland's historic towns. The 2024 initiative has a particular interest in projects that aim to address town centre vacancy and the reuse of historic structures which can then act as demonstrator projects.
Waste	Waste Management Act 1996 (as amended) and the European Communities (Waste Directive) Regulations 2011 (S.I. 323 of 2011 & S.I. 126 of 2011) and Waste Management (Amendment) Act 2001	The Waste Framework Directive sets out the approach for the sustainable management of waste in the Member States of the European Community and this has been transposed into Irish law by the Waste Management Act 1996 and the European Communities (Waste Directive) Regulations 2011. This legislation requires the preparation of a regional waste management plan for all regions within the state, as well as a national hazardous waste management plan for the state. The objectives of the amendment act include, amongst others, the more effective and environmentally sensitive management of wastes in Ireland.
	Circular Economy and Miscellaneous Provisions Act 2022	At national level, the Circular Economy and Miscellaneous Provisions Act 2022 defined the Circular Economy for the first time in Irish domestic law. Key measures within the Act include incentives for the use of reusable and recyclable alternatives to a range of wasteful single-use disposable packaging and other items, the re-designation of the Environment Fund as a Circular Economy Fund and introduces a mandatory segregation and incentivised charging regime for commercial waste. The Act also seeks to streamline the national processes for End-of-Waste and By-Products Decisions, tackling the delays which can be encountered by industry, and supporting the availability of recycled secondary raw materials in the Irish market.
	National Waste Management Plan for a Circular Economy 2023-2029	This national plan was prepared to replace the previous three Regional Waste Management Plans 2015-2021. It sets out a framework for the prevention and management of waste in Ireland for the period 2023 to 2029. The plan aims to support and supplement the wider policy base while also including specific targets, policies and actions to enable the waste and resource sector to meet the circular challenge.
	Waste Action Plan for a Circular Economy – Ireland's National Waste Policy (DECC, 2020)	This new Waste Action Plan was published as a key action under the Programme for Government. It builds on A Resource Opportunity as the previous waste management policy for Ireland, and takes on board the changes in waste management and legislation that have occurred since. It aligns with the EU Green Deal and the EU Circular Economy Action Plan, on the need to drive transition to a circular economy, as well as embedding climate action. Ireland's Action Plan contains over 200 actions across the different areas of waste and waste management.
	Whole of Government Circular Economy Strategy (CES) 2021-2022	The Whole of Government Circular Economy Strategy (CES) 2021-2022 is a strategic document that is intended to explain what the circular economy is, why Ireland needs to achieve a circular economy and how national policy will develop to support that goal. The strategy sets out the national policy framework to support the transition to a circular economy and encourages investment in reuse, remanufacturing, repair and refurbishment and eco-design. The CES explains why Ireland needs to achieve a circular economy and how national policy will develop to support that goal.

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	Fourth National Hazardous Waste Management Plan 2021-2027 (EPA)	The Plan makes recommendations, in accordance with Section 26(2) of the Waste Management Act 1996 as amended, for actions and infrastructure that the EPA considers necessary and appropriate to achieve the stated Plan objectives. The recommendations are based on an analysis of statistical data and the policy and business environment surrounding hazardous waste management. The third plan covers the period 2014-2020. The fourth iteration of the plan is being prepared by the and covers the period 2021 – 2027. It sets out the objectives and recommendations to be pursued over the next six years and beyond to improve the management of hazardous waste in Ireland, with a particular emphasis on prevention and reduction principles.
	National Food Waste Prevention Roadmap 2023-2025	The National Food Waste Prevention Roadmap 2023-2025 documents how Ireland will achieve a 50% reduction in food waste generation by 2030 in line with the UN SDG Target 12.3. In addition, the roadmap sets out the approach to ensure a robust national system for food waste measurement and reporting is established in order to meet Ireland's reporting obligations and to monitor Ireland's progress in meeting its UN and EU commitments over the next decade. The issue of food waste has implications for climate actions and is a key issue area to tackle, as the majority of food waste, at 71% of 2021 figures, is generated along the supply chain before it gets to households.
Material Assets	National Ports Policy (DTTAS, 2013) (<i>under review</i>)	The national Ports Policy outlines the organisational and ownership structure of ports in Ireland. This policy document covers: the Trans European Network – Transport (TEN-T), Ports of National Significance (Tier 1 and Tier 2) and Ports of Regional Significance; corporate governance; how ports policy relates to the planning and development system; and environmental and foreshore issues. The policy document also sets out key actions and timelines up to 2018.
	National Sustainable Mobility Policy	The Department of Transport's National Sustainable Mobility Policy, published in April 2022, sets out a strategic framework to 2030 for active travel and public transport. The policy aims to support Ireland's overall requirement to achieve a 51% reduction in carbon emissions by the end of this decade. The policy targets of at least 500,000 additional daily active travel and public transport journeys and a 10 percent reduction in kilometres driven by fossil fuelled cars by 2030, in line with targets for transport set out in the CAP 2021. For TII, actions relating to National Roads are set out in the NR2040 Strategy.
	Trans-European Transport Network (TEN-T) Policy	The TEN-T Policy, based on Regulation (EU) No 1315/2013, supports provision of quality transport infrastructure across the European Union. The objective is to improve the use of infrastructure, reduce the environmental impact of transport, enhance energy efficiency, and increase safety whilst implementing and developing a Europe-wide transport network. TEN-T policy comprises two 'layers': the Comprehensive Network covers all European regions and is to be completed by 2050; and the Core Network, subset of the comprehensive network, to be completed by 2030.
	National Policy Framework on Alternative Fuels Infrastructure for Transport in Ireland (DoT, 2019)	This policy framework represents the first step in communicating the government's longer term national vision for decarbonising transport by 2050, the cornerstone of which is the ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable.
	National Land Transport Strategic Framework (2023-2028) (DoT)	The NLTSP sets out strategic priorities to apply transport planning in achieving social, health, economic and environmental outcomes. The identified strategic priorities and outcomes link the Framework to the National Development Plan, National Transport Master Plan (NATMAP), provincial and municipal transport and spatial planning (SDF's, CITP, Bulk Infrastructure Master Plans and DDM's at Local Government level).
	All-Island Strategic Rail Review (in draft by DoT) (2023)	The draft AISRR 2023 aims to inform policy and future strategy for the railways in both jurisdictions on the island of Ireland. It has examined how the island's railways are currently used, what role rail could play in the future and how the island's railway could better serve the people of both jurisdictions. The AISRR has focused on how the rail

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	network across the island could contribute to the decarbonisation of the island's transport system, promote sustainable connectivity into and between major cities, enhance regional accessibility and support balanced regional development. Public consultation on the draft AISRR has now closed.
National Investment Framework for Transport Investment (DoT, 2021)	The National Investment Framework for Transport in Ireland is the strategic framework for future investment decision making in land transport. It will guide transport investment in the years ahead to enable the National Planning Framework, support the Climate Action Plan, and promote positive social, environmental and economic outcomes throughout Ireland.
A National Aviation Policy for Ireland (DTTAS, 2015)	This policy document sets out the international context for aviation policy in Ireland. The document covers: safety, security and sustainability; connectivity and aviation services; airports; regulation and governance; aircraft leasing, financing and MRO; general aviation, education and training.
TII Climate Adaptation Strategy	The Transport Infrastructure Ireland (TII) Climate Adaptation Strategy, published in December 2022, outlines TII's approach to adapting to climate change and extreme weather events, including flooding, increased risk of landslides, pavement degradation and possible storm damage that will affect the National Roads network and light rail networks. The Strategy builds upon the previous climate adaption strategy published by TII in 2017. The strategy also responds to the Climate Action Plan 2021 (CAP21) Action 297, "Improve climate resilience and adapt to climate change on the Light rail and National Road Network".
National Roads 2040	National Roads 2040 (NR2040) is TII's long-term strategy for planning, operating, and maintaining the National Roads network. NR2040 has been developed to support the delivery of Project Ireland 2040 objectives and to align with the Department of Transport's National Investment Framework for Transport in Ireland (NIFTI, December 2021). NR2040 also aligns with commitments in wider policy including the Climate Action Plan and the Department of Transport's National Sustainable Mobility policy.
CycleConnects	CycleConnects is the NTA's plan currently under development in liaison with local authorities, setting out proposals for cycling links in key cities, towns and villages in each county, in addition to connections between the larger towns, villages and settlements. Both the NCN (as the inter-urban cycling network) and CycleConnects (representing the intra-urban cycling network) will inform Ireland's active travel programme. This network will include many existing and planned greenway routes. The draft proposals under CycleConnects will complement existing plans already developed for the GDA. Delivery partners will include TII, NTA and the Department of Transport in conjunction with the relevant local authority. These two strategies aim to inform future investment by local authorities in the coming years.
The National Cycle Network (NCN)	The NCN is TII's planned core cycle network, comprising 3,500 km of cycleways, that will aim to traverse the country and connect more than 200 villages, towns and cities, as well as links to transport hubs, education centres, employment centres, recreational destinations. The NCN is currently under public consultation

Review of Regional and Local Level Plans and Programmes

Topic	Title	Summary of Objectives: Regional
Planning	Regional Spatial and Economic Strategies	Regional Spatial and Economic Strategies (RSES) are intended to replace the current Regional Planning Guidelines. The RSEs are expected to cover the period 2016-2022.

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Topic	Title	Summary of Objectives: Regional
		Regional structures and functions are currently being revised and strengthened; the existing eight regional authorities and two assemblies are being replaced by three new Regional Assemblies to perform an updated range of strategic functions. In addition to formulating RSEs, the main functions of the new Regional Assemblies will also include strategic functions under relevant legislation, functions that relate to EU funding programmes as well as oversight of local authority performance and the implementation of national policy.
	County Development Plans	This Development Plan is the county's principle strategic planning policy document. Detailed land-use zoning maps for the main settlements of the county are contained in the Electoral Area Local Area Plans and the Special Local Area Plans. It is a six year development plan for the County that attempts to set out, as concisely as possible the County's current thinking on planning policy. The plan also sets out the overall planning and sustainable development strategy for the county which must be consistent with the National Spatial Strategy 2002-2020 and the Regional Planning Guidelines 2010-2022.
	County Tourism Strategies	The purpose of these Strategies is to provide an agreed framework to guide the actions of the many interests involved in the tourism sector. They normally include priorities and recommended actions to achieve the tourism vision for a County.
	County and City Heritage Plans	County & City Heritage Plans highlight the strategic importance of heritage and each plan outlines proposals for managing and promoting heritage at a county level. The Heritage Plans identify objectives and actions to achieve those objectives as well as providing a mechanism to measure progress.
	Local Economic Plans	Local Economic Plans cover a six-year period and has jurisdiction over respective local authority areas across Ireland. These plans provide actions and objectives to aid in the promotion / support of economic development and local / community development of the respective areas.
	Dublin City Development Plan 2022-2028 (Brownfield Development Objectives)	The Dublin City Development Plan 2022-2028 sets out a couple of objectives around brownfield and infill lands. Objective CS06 states ' <i>To develop an active land management register and database for the city, which shall include mapping of brownfield and other lands, such as vacant, under-utilised or large undeveloped sites, tracking progress on planning applications and identification of barriers to development, with the aim of promoting and co-ordinating development on the lands identified.</i> ' Objective CS07 states ' <i>To promote the delivery of residential development and compact growth through active land management measures and a co-ordinated approach to developing appropriately zoned lands aligned with key public transport infrastructure, including the SDRAs, vacant sites and underutilised areas.</i> '
	The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2017	This Regulation implements Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private project. It is concerned with general rules and administrative matters regarding the assessment of the effects of certain public and private developments.
	Northern Ireland Regional Development Strategy 2035	The Regional Development Strategy (RDS) is a document published in 2012 by the Department of Regional Development. This document provides an overarching strategic planning framework influencing spatial development for Northern Ireland up to 2035, aimed at guiding both the public and private sectors. It complements the policy document <i>Strategic Planning Policy Statement (Department of the Environment, 2015): the Sustainable Development Strategy</i> and informs the spatial aspects of the strategies of all Government Departments. Key objectives of the RDS are: <ul style="list-style-type: none"> • Support strong, sustainable growth for the benefit of all parts of Northern Ireland; • Strengthen Belfast as the regional economic driver and Londonderry as the principal city of the North West; • Support towns, villages and rural communities to maximise their potential;

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Topic	Title	Summary of Objectives: Regional
		<ul style="list-style-type: none"> • Promote development which improves the health and wellbeing of communities; • Improve connectivity to enhance the movement of people, goods, energy and information between places; • Protect and enhance the environment for its own sake; • Take action to reduce carbon footprint and facilitate adaptation to climate change; and • Strengthen links between north and south, east and west, with Europe and the rest of the world.
	Planning Act (Northern Ireland) 2011	This Act provides the legislative basis for the reform of the Northern Ireland planning system. The reforms concern every aspect of planning, including how development plans are drawn up, how development proposals and applications are managed and the way in which these functions are delivered. The Act transfers the majority of planning functions and decision-making responsibilities for local development plans, development management plus planning enforcement from central government to district councils.
	Strategic Planning Policy Statement (NI Department of the Environment, 2015)	<p>This policy document represents a statement of the Department of the Environment's policy on important planning matters, reflecting the Environment Ministers expectations for delivery of the planning system. Its key aims are:</p> <ul style="list-style-type: none"> • Delivering sustainable planning policies and plans; • Integrating and balancing social, economic and environmental factors when plan-making and decision-taking; and • Helping to mitigate and adapt to climate change and the reduction of greenhouse gases.
	Local Development Plans in Northern Ireland sharing a border with the Republic of Ireland	These include: Fermanagh and Omagh, Newry, Mourne and Down, Derry City and Strabane, Armagh, Banbridge and Craigavon District I and Mid-Ulster District I.
Biodiversity	The Wildlife (Northern Ireland) Order 1985 (as amended)	This Order lays down provisions in Northern Ireland with regard to the protection of wild birds, their nests and eggs, the prohibition of certain methods of killing or taking wild birds and the sale of live or dead wild birds or eggs. It also concerns the protection of captive birds.
	Wildlife and Natural Environment Act (Northern Ireland) 2011	This Act requires every public body to promote the conservation of biodiversity and defines functions of public bodies in Northern Ireland with respect to the conservation of biodiversity. It also contains provisions for the conservation of wild fauna and flora and habitats. The Act amends the Wildlife (Northern Ireland) Order 1985 and the Environment (Northern Ireland) Order 2002.
	The Environment (Northern Ireland) Order 2002	This order sets out a range of requirements for the protection and management of the environment, including the prevention and control of pollution, the conservation of natural habitats and biodiversity, and the regulation of waste management.
	The Conservation (Natural Habitats etc) Regulations (Northern Ireland) 1995	This regulation aims to protect certain birds, plants, animals, marine life and their habitats, including Natura 2000 sites, through creating criminal offences and changing planning requirements.
	Biodiversity Strategy for Northern Ireland to 2020	A strategy for Northern Ireland to meet its international obligations and local targets to protect biodiversity and ensure that the environment can continue to support our people and economy.
	The Northern Ireland Peatland Strategy 2021 – 2040 (in draft by DAERA)	The Strategy identifies the ecosystem services provided by healthy peatlands, including climate regulation and adaptation, specialised biodiversity, good water quality, flood alleviation and a historical archive. Peatlands also provide a unique landscape for recreation and education.

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Topic	Title	Summary of Objectives: Regional
Water and Wastewater	Northern Ireland River Basin Management Plans 2021-2027 (DAERA, 2020) <i>[in Draft]</i>	In Northern Ireland, the Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 ensures that the Water Framework Directive (as transposed) and the various supporting pieces of water legislation continue to operate after 1 January 2021. The Department of Agriculture, Environment and Rural Affairs (DAERA) is responsible in Northern Ireland for producing a River Basin Management Plan. As with Ireland's RBMP, Northern Ireland has moved into its third cycle of plan making for 2021-2027 and the draft plan is out for public consultation covering the Neagh Bann, North Eastern and North Western River Basin Districts.
	Northern Ireland Second Cycle River Basin Management Plans 2015-2021 (DAERA, 2015)	The second cycle RBMPs provided an overview of changes and highlighted any progress that had been made since the first cycle. These plans built on the baseline established during the first cycle plans and incorporated 136 specific measures to improve the water bodies not yet at 'good' status and to prevent deterioration of individual rivers, lakes, marine and groundwater bodies.
	Marine Act (Northern Ireland) 2013	An Act to provide for marine plans in relation to the Northern Ireland inshore region; to provide for marine conservation zones in that region; to make further provision in relation to marine licensing for certain electricity works in that region; and for connected purposes.
	Marine and Coastal Access Act 2009	An Act to make provision in relation to marine functions and activities; to make provision about migratory and freshwater fish; to make provision for and in connection with the establishment of an English coastal walking route and of rights of access to land near the English coast; to enable the making of Assembly Measures in relation to Welsh coastal routes for recreational journeys and rights of access to land near the Welsh coast; to make further provision in relation to Natural England and the Countryside I for Wales; to make provision in relation to works which are detrimental to navigation; to amend the Harbours Act 1964; and for connected purposes.
	UK Marine Policy Statement (MPS)	The MPS was published in 2011 and provides a framework for preparing Marine Plans and taking decisions affecting the UK marine environment. This policy statement will contribute to the achievement of sustainable development in the UK marine area.
	Marine Plan for Northern Ireland (DAERA, 2018) <i>[in Draft]</i>	The proposed Marine Plan for Northern Ireland will inform and guide the regulation, management, use and protection of the Northern Ireland marine area. It seeks to develop a new planning approach to support the sustainable management of the marine area, including both inshore and offshore regions.
	Marine Strategy Regulation (part I, II, and III)	The Strategy set out a comprehensive framework for assessing, monitoring and taking action across our seas to achieve the UK's shared vision for clean, healthy, safe, productive and biologically diverse seas. The Strategy has 3 components: Part one: an assessment of marine waters, objectives for GES and targets and indicators to measure progress towards Good Environmental Status (GES) (published December 2012) Part two: sets out the monitoring programmes to monitor progress against the targets and indicators (published August 2014) Part three: sets out a programme of measures for achieving GES (published December 2015)
	Integrated Coastal Zone Management (ICZM) Strategy for Northern Ireland 2006-2026	The objective of the ICZM is to establish sustainable levels of economic and social activity in coastal areas while protecting the coastal environment. The ICZM seeks to reconcile the different policies that have an effect on the coast and to establish a framework that facilitates the integration of the interests and responsibilities of those involved in the development, management and use of the coast.
	Fisheries Act (NI) 1966 (as amended)	An Act to extend the functions of the Ministry of Agriculture in relation to fisheries and to make provision for the development and improvement of fisheries by, or with the assistance of, that Ministry; to establish the Fisheries Conservancy Board for

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Topic	Title	Summary of Objectives: Regional
		Northern Ireland, and to define their functions; to provide for the transfer to that Board of the property, rights and liabilities of, and to dissolve, the existing boards of conservators; to consolidate with amendments the Fisheries Acts (Northern Ireland) 1842 to 1954 and certain other enactments relating to fisheries; otherwise to amend the law with respect to fisheries; and for purposes connected with those matters.
	UK Fisheries Act 2020	An Act to make provision in relation to fisheries, fishing, aquaculture and marine conservation; to make provision about the functions of the Marine Management Organisation; and for connected purposes.
	Drinking Water Safety Plans <i>[in prep.]</i>	Following the revisions to the Drinking Water Directive (2020/2184), the EPA has adopted the World Health Organisation (WHO) approach to Drinking Water Safety Plans (DWSP), which is a risk management system designed to identify potential risks to a water supply, as well as those areas in need of remedial action. The responsibility to devising DWSP lies with the national water sul.i.e. Irish Water, and the technical work is now underway to develop the risk assessments. This will lower the risks to drinking water sources from pollutants and microbial contaminants in both public and private water sources.
	Water and Sewerage Services (Northern Ireland) Order 2006 (S.I. No. 3336 (N.I. 21) of 2006)	This order concerns the reform of the water industry in Northern Ireland. It transfers responsibility for delivery of water and sewerage services from the Department for Regional Development to a government owned company and places extensive general and specific duties on the company as a water and sewerage undertaker. It provides detailed statutory powers to enable water and sewerage undertakers to carry out their duties, with suitable safeguards for customers.
	Private Water Supplies Regulations (Northern Ireland) 2017	These regulations provide rules for private supply services in Northern Ireland of water intended for human consumption not provided by a water undertaker appointed under Article 13 of the Water and Sewerage Services (Northern Ireland) Order 2006.
	Water Supply (Water Quality) Regulations (Northern Ireland) 2007 (S.R. No. 147 of 2007)	These Regulations prescribe new rules relative to the quality of water supply services to reflect the change in delivery of water services from the Department for Regional Development to a water undertaker. They also concern arrangements for the publication of information about water quality.
	Catchment Flood Risk and Management Studies (CFRAMS)	The Office of Public Works (OPW) is responsible for the implementation of the Floods Directive 2007/60/EC which is being carried out through a Catchment-based Flood Risk Assessment and Management (CFRAM) Programme. As part of the directive Ireland is required to undertake a Preliminary Flood Risk Assessment (PFRA), to identify areas of existing or potentially significant future flood risk and to prepare flood hazard and risk maps for these areas. Following this, Flood Risk Management Plans (FRMPs) are developed for these areas setting objectives for managing the flood risk and setting out a prioritised set of measures to achieve the objectives. The CFRAM programme is currently being rolled out and Draft FRMPs have been prepared.
	Groundwater Protection Schemes	Groundwater protection schemes are undertaken jointly between the Geological Survey of Ireland and the local authorities. The objectives of such schemes are to preserve groundwater quality, in particular having regard to extraction for drinking water purposes. The schemes do not have any statutory authority but do set out a framework to help inform decision-making and provide guidelines for the local authorities in carrying out their functions. The Plan should have regard to any such groundwater protection schemes.
	Shellfish Pollution Reduction Programmes	The aim of the Shellfish Waters Directive is to protect or improve shellfish waters (see Shellfish Waters Directive, 2006/113/EC). The Directive requires Member States to designate waters that need protection in order to support shellfish life and growth. The Directive also provides for the establishment of pollution reduction programmes for the designated waters, of which there are 63 nationally.

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Topic	Title	Summary of Objectives: Regional
	Freshwater Pearl Mussel Sub-basin Management Plans <i>[in Draft]</i>	The draft Sub-basin Management Plans identify issues relevant to mussel conservation and propose realistic solutions.
	Forestry and Freshwater Pearl Mussel Plan (DAFM)	As the consenting authority for key forestry activities, the Department of Agriculture, Food & the Marine (DAFM), through the Forest Service (FS-DAFM), has direct responsibilities under the Habitats Directive in relation to the protection of Freshwater Pearl Mussel (FPM) and its habitat. These responsibilities provide the underlying basis for the development of procedures to ensure that forestry activity undertaken with in all 27 FWPM catchments (including the Priority 8 catchments) are compatible with the conservation of the species.
	Northern Ireland Regional Seascape Character Areas (DAERA, 2014)	A report providing a strategic understanding of different areas of regional seascape character along the entire Northern Ireland coast
	Water Quality Management Plans	Water Quality Management Plans are a requirement under The Water Pollution Acts, 1977 and 1990 and regulations made thereunder. The aim of the plans is to manage and protect water at catchment-based level.
Climate/ Energy	Local Authorities Climate Action Plans (in draft by LAs)	These plans will drive the adaptation and mitigation measures required at local level. The plans will see each local authority actively translating national climate policy to local circumstances with the prioritisation and acceleration of evidence-based measures, to assist in the delivery of the climate neutrality objective at local and community levels.
	County Wind Energy Strategies	This Wind Energy Strategy has had regard to the following Specific Planning Policy Requirement contained in the Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (2017): It is a specific planning policy requirement under Section 28(1C) of the Act that, in making, reviewing, varying or amending a development plan, or a local area plan, with policies or objectives that relate to wind energy developments
	County Renewable Energy Strategies	The county strategies take account of new technologies in renewable energy development that may not have been considered in the previous County Development Plan (CDP) and associated strategies such as the Wind Energy Strategy. There is no statutory requirement to prepare a LARES as part of statutory plan making process.
	Environmental Strategy for Northern Ireland (DAERA)	The Strategy sets out Northern Ireland's environmental priorities for the coming decades and will form part of the Green Growth agenda.
	The Green Growth Strategy	This Strategy sets out an ambitious vision and a framework for delivery with which all other NI government policies and strategies must align. It provides us with a vitally important opportunity to embed wider climate change, a green economy and environmental considerations into decision making.
	Northern Ireland Climate Change Adaptation Programme	The UK Climate Change Act 2008 requires Northern Ireland Government Departments to prepare an Adaptation Programme which responds to the climate change risks and opportunities for Northern Ireland (NI) as identified in the most recent UK Climate Change Risk Assessment (UKCCRA).
	Adapting to Climate Change – Progress in Northern Ireland	This report sets out an assessment of progress in adapting to climate change in Northern Ireland.
Cultural Heritage	Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995	This order allows for historic monuments to be protected by taking them into State Care or by Scheduling for protection. It also places restrictions on searching for archaeological material.

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Topic	Title	Summary of Objectives: Regional
	Protection of Wrecks Act 1973 (Northern Ireland)	An Act to secure the protection of wrecks in territorial waters and the sites of such wrecks, from interference by unauthorised persons; and for connected purposes.
	Archaeology 2030: A Strategic Approach for Northern Ireland	This document sets out a strategic approach and recommendations as to how society should develop engagement with, and understanding of, archaeology in Northern Ireland. The main vision of the strategy is for archaeology to be accessed and valued by as many people as possible, led by a sector which is healthy, resilient and connected.
Landscape	Shared Horizons (DAERA)	'Shared Horizons' is the Northern Ireland Department of the Environment's Statement of Policy on Protected Landscapes. The statement sets out the issues associated with the protection and sustainable use of Northern Ireland's finest landscapes and indicates the way in which the Department plans to address them.
	Northern Ireland Landscape Character Assessment 2000	This assessment has been defined as the process of identifying and describing variation in the character of the landscape. It seeks to identify and explain the unique combination of elements and features (characteristics) that make landscapes distinctive. This process results in the production of a Landscape Character Assessment.
Material Assets	Greater Dublin Area Cycle Network Plan	The Greater Dublin Area Cycle Network Plan covers the urban network, inter-urban network and green route network for each of the seven local authority areas comprising the Greater Dublin Area. It is currently being updated.
	Active Travel Programme	The NTA's Active Travel Programme is managed and delivered by the Local Authorities. One of the key aims cited is to increase the number of walking and cycling networks so that walking, cycling and public transport will account for 50% of all journeys made by 2030. By 2025, the NTA aims to have delivered in excess of 1,200 projects equating to 1,000 km of combined cycling and walking routes nationwide.
	Transport Strategy for the Greater Dublin Area 2022-2042	The Transport Strategy for the Greater Dublin Area 2022-2042 has been prepared and published by the National Transport Authority (NTA) in accordance with Section 12 of the Dublin Transport Authority Act, 2008. It sets out how transport will be developed across the region, covering Dublin, Meath, Wicklow and Kildare, over the period of the strategy and has been approved by the Minister for Transport in accordance with the relevant legislation.
	Cork Metropolitan Area Transport Strategy (CMATS) 2040	The CMATS 2040 has been developed by the NTA in collaboration with Transport Infrastructure Ireland (TII), Cork City Council and Cork County Council. A key principle for CMATS is to reduce dependency on the private car within the CMA, while increasing the appeal of sustainable transport options. Another fundamental principle of the Strategy is to support the future growth of the CMA through the supply of an efficient transport network. Supporting measures have an important role to play in providing a future transport network that matches up to these principles.
	Galway Transport Strategy (GTS)	The GTS is an integrated transport strategy for Galway City and environs. The GTS sets out a series of actions and measures, covering infrastructural, operational and policy elements to be implemented in Galway over the next 20 years and sets out a framework to deliver the projects in a phased manner.
	Limerick Shannon Metropolitan Area Transport Strategy (LSMATS)	The LSMATS sets out the framework for the delivery of the transport system required to further the development of the Limerick Shannon Metropolitan Area as a hub of cultural and social development and regeneration; as the economic core for the Mid-West; as an environmentally sustainable and unified metropolitan unit; as a place where people of all ages can travel conveniently and safely; and a place that attracts people, jobs and activity from all over Ireland and beyond.
	Waterford Metropolitan Area Transport Strategy (WMATS)	The WMATS sets the framework for an accessible, high-quality and integrated transport network that provides for the travel demand and supports the sustainable growth of the Waterford Metropolitan Area as a major growth engine of the Southern Region, and an internationally competitive European city region as envisaged by the National Planning Framework 2040.

SEA Environmental Report

Topic	Title	Summary of Objectives: Regional
Air Quality	Dublin Region Air Quality Plan	In 2021, the four Local Authorities of the Dublin region published the Dublin Region Air Quality Plan which sets out 14 measures and associated actions to address the exceedance of the nitrogen dioxide annual limit values in the region. While the measures will be given expression through county and local planning tiers the implications for the Dublin MASP will need to be considered in the draft first revision. It is noted that the Dublin Region Air Quality Plan is legally binding.

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