SEA Report January 2026

Draft Cork Wastewater Strategy

(Cork Metropolitan Area)

Strategic Environmental Assessment: Environmental Report - Non-Technical Summary (NTS)

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Project Ireland
2040

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Acronyms and Abbreviations

Term	Definition	Term	Definition
AA	Appropriate Assessment	EU	European Union
CMA	Cork Metropolitan Area	GHG	Greenhouse Gas
CSO	Central Statistics Office	NIS	Natura Impact Statement
CWS	Cork Wastewater Strategy	NPWS	National Parks and Wildlife Service
DAFM	Department of Agriculture, Food and the Marine	RBMP	River Basin Management Plan
DECC	Department of the Environment, Climate and Communications	SAC	Special Area of Conservation
DHLGH	Department of Housing, Local Government and Heritage	SEA	Strategic Environmental Assessment
DHPLG	Department of Housing, Planning and Local Government	SMR	Sites and Monuments Record
EEA	European Environment Agency	Natura Impact Statement	Special Protection Area
EPA	Environmental Protection Agency	WFD	Water Framework Directive
EC	European Communities	UN	United Nations
EIA	Environmental Impact Assessment	WFD	Water Framework Directive
ELC	European Landscape Convention	WSSP	Water Services Strategic Plan
ELV	Emission Limit Values	WwTP	Wastewater Treatment Plant
ESDL	Environmentally sustainable discharge limits		

Glossary

Glossary Term	Definition
AA Screening Report	The report which provides information on and assesses the potential for whether the proposed plan or project is likely to have a significant effect, either individually or in combination with other plans or projects, on European site(s) in view of the site's conservation objectives.
Agglomeration	An area where the population expressed in population equivalent, combined or not with economic activities, is sufficiently concentrated for urban wastewater to be collected and conducted to one or more urban wastewater treatment plants or to one or more final discharge points
Alien species	Animals and plants that are introduced accidentally or deliberately into a natural environment where they are not normally found.
Appropriate Assessment	An assessment required under the Habitats Directive to determine if the project or plan will adversely affect the integrity of a European site(s) either individually or in-combination with other plans and projects in view of the site's conservation objectives.
Assimilative Capacity	The ability for pollutants to be absorbed by an environment without detrimental effects to the environment or those who use of it.
Baseline Environment	The state of the environment in the absence of the Plan.
Catchment	The total area of land that drains into a watercourse.
Cumulative effect	The combined effects from several plans, programmes or policies.
Emission Limit Value	The maximum allowable concentration or quantity of a pollutant that can be released into the environment from a specific source over a given period.
Environmental Quality Standards	Legally or advisory defined limits for the concentration of substances in the environment that are intended to protect human health and ecosystems from harmful effects. They represent the environmentally sustainable levels for specific pollutants or the desired state of environmental quality.
Environmentally sustainable discharge limits	Environmentally sustainable discharge limits are regulations that set maximum allowable concentrations of pollutants in wastewater discharged into the environment to protect water quality and ecosystems. These limits are determined by both the technology available for treatment (technology-based) and the water quality standards of the receiving water (water quality-based).
European site	European sites refer to Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated under the EU Habitats and Birds Directives.
Horizon periods/ Planning horizons	Time periods over which it is possible to plan with reasonable accuracy. In the case of the draft CWS this is 2030, 2055 and 2080.
Invasive species	Non-native species that out-compete native species to the detriment of an ecosystem.

Glossary Term	Definition
Likely Significant Effect	Term adapted from Article 6(3) of the Habitats Directive ("likely to have a significant effect"), describing the type of effects which, if identified as potentially arising as a result of a project or plan, trigger an AA.
Mitigation	The implementation of measures designed to reduce the predicted effects of a plan or project on the environment.
Natura Impact Statement	A document which is a scientific assessment of the potential adverse effects of a proposed plan or project on a Natura 2000 site and forms part of the decision making of the AA.
Population Equivalent	Wastewater treatment plants are described in terms of their designed treatment capacity, which is generally expressed as population equivalents (PE). This is a measurement of total organic biodegradable load, including industrial, institutional, commercial and domestic organic load, on a wastewater treatment plant, converted to the equivalent number of population equivalents (PE). One person is considered to generate 60g of BOD per day (BOD is the 5 day biochemical oxygen demand); and 1 PE is defined as being equivalent to 60g of BOD per day.
Strategic Environmental Assessment (SEA) Environmental Report	This is the stage 3 report for the SEA that documents the assessment undertaken of the plan against the SEA objectives finalised following the SEA Scoping consultation. The report set out how the environmental assessment has been integrated into the development of the plan and includes consideration of reasonable alternatives and cumulative effects and identifies for the plan proposals, the potential significant effects and mitigation measures required to address these or support meeting the SEA objectives. The SEA Environment Report is provided for public consultation alongside the draft plan.
SEA Screening statement	A summary of the SEA screening determining whether the proposed plan requires SEA.
SEA Scoping Report	The SEA report sets out the scope and objectives of the SEA.
SEA Post Adoption Statement	The document which details how environmental considerations have been integrated into the plan, how the environmental report and consultation responses were taken into account, the reasons for choosing the plan as adopted in light of reasonable alternatives considered and the measures to be taken into account to monitor or mitigate the likely significant effects.
Special Area of Conservation	An international designation for habitats and/or species under the EC Habitats Directive.
Special Protection Area	A site of international importance for birds, designated as required by the EC Birds Directive.
Strategic Environmental Objectives	Methodological measures against which the effects of the Plan can be tested.
Sub-catchment	Smaller areas than the CMA comprising interconnected WwTPs. Individual sub-catchments may also be interconnected

Glossary Term	Definition
Zone of Influence	This is the area where an activity or pressure can directly or indirectly impact the environment or other systems. It defines the spatial area over which there is potential for LSEs, taking account of the sensitivity and mobility of different QI/Special Conservation Interest, on species or habitats from a project or plan.

NTS 1 Introduction and Background

NTS 1.1 Purpose of this document

This is the Non-Technical Summary (NTS) of the Strategic Environmental Assessment (SEA) Environment Report of the draft Cork Wastewater Strategy (CWS).

This report has been prepared on behalf of the Uisce Éireann having regard to the Strategic Environmental Assessment (SEA) Directive (2001/42/EC) and its provisions that are transposed into Irish law by European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004 as amended in 2011) (SEA regulations).

The SEA Regulations have been established as applicable to the CWS through SEA screening published with the SEA Scoping Report as part of consultation with the statutory environmental authorities on the approach to the assessment.

NTS 1.2 The Need for a Wastewater Strategy for Cork

The CWS aims to identify sustainable wastewater strategy projects for the expanding Cork Metropolitan Area (CMA) through 2080. Delivering a sustainable, integrated wastewater strategy for the CMA requires a strategic approach to wastewater infrastructure planning. This approach will incorporate the needs for long-term sustainability and whole life value, maximising value from our wastewater assets, incorporating climate adaptation and mitigation, service resilience, biodiversity enhancement and wider societal benefits.

Figure NTS 1.1 Uisce Éireann statistics and Wastewater Treatment Plants

The CMA (see Figure NTS 1.1) is a major regional metropolitan area, identified as such in the National Planning Framework (NPF)[1] and in the Regional Spatial and Economic Strategy (RSES) 2020-2032[2] to ensure long term economic, environmental, and social progress. The CMA includes Cork City, its suburbs and the towns and rural areas in the immediate hinterland of the city of Cork as a single integrated unit. Cork City is the largest settlement within the CWS, comprising 14% of the regional population. It is situated on the Lee Estuary, which receives flows from the River Lee which drains the area. The CMA covers 820km² and has a population of approximately 310,000 as determined from the Census 2022. The NPF 2040 envisages that Cork will become the fastest-growing city region in Ireland with a projected 50% to 60% increase of its population in the period up to 2040. This projected population and associated economic growth will result in a significant increase in water supply and demands on the existing wastewater infrastructure within the area. The existing wastewater infrastructure is already being challenged to keep pace with the increased demand for new serviced land needed for housing, commercial developments and industry.

The CWS assesses wastewater treatment and network infrastructure in the CMA to identify what future investment will be required in the medium and long term. The scope of the CWS is to produce a report that will identify sustainable wastewater strategies and projects for the growing CMA. This will address challenges posed by climate change, supports economic and population growth and aims to avoid adverse environmental impacts over three horizon periods up to 2080 (2030, 2055 and 2080).

The strategy includes analysis of the existing wastewater infrastructure along with data gathering, population and economic growth assessments, strategic environmental assessment, and consultation with interested stakeholders to identify medium and long-term solutions to the wastewater needs of the region. The strategy aims to be consistent with statutory obligations and regulatory drivers designed to meet both national and international environmental objectives outlined in the Water Framework Directive (WFD) and recast Urban Wastewater Treatment Directives (rUWWTD).

Typical solutions identified and assessed include the rationalisation of a number of wastewater treatment plants (WWTPs), increasing capacity to accommodate a growing population, and enhancing networks to meet new standards that limit stormwater overflow (SWO) operations and protect against climate-induced flood risks. Following recent major storm events in the CMA and the knock-on effects on UÉ assets, an examination on the resilience of energy and power security will form part of the CWS. To ensure the strategy remains relevant and representative of the changing environment, it will be regularly revised.

The CWS is subject to the Strategic Environmental Assessment Directive (SEA Directive) Council Directive 2001/42/EC, the Birds Directive (Council Directive 2009/147/EC) and the Habitats Directive (Council Directive 92/43/EEC).

NTS 1.3 The Strategic Environmental Assessment (SEA) Process

The aim is that the SEA process should influence and improve the proposed CWS. The process involves assessing the likely significant effects on the environment of implementing the strategy and considering reasonable alternatives for achieving strategy objectives. The SEA process is undertaken as a four-stage process (detailed in Table NTS 1.1).

[1] Government of Ireland: Project Ireland 2049 National Planning Framework First Revision, April 2025. Accessed June 2025. Available from https://cdn.npf.ie/wp-content/uploads/National-Planning-Framework-First-Revision-April-2025-1.pdf

[2] Southern Regional Assembly. 2020. Southern Regional Spatial and Economic Strategy. Accessed: March 2025. Available from: https://www.southernassembly.ie/regional-planning/rses

Table NTS 1.1 Stages of the SEA

Stage	Purpose and Requirements	Output
Stage 1: Screening	Prior to starting the SEA process, a plan or programme undergoes 'screening' to determine whether it requires SEA (also if SEA is to be undertaken on a voluntary basis).	SEA Screening Statement – Uisce Éireann (as the responsible authority) determined that SEA would be undertaken for the CWS (included with the Scoping Report)
Stage 2: Scoping	Consideration of the context and objectives of the SEA, provides information on baseline data, identifies relevant environmental issues and trends, and defines the parameters of the scope of the SEA for the purpose of consultation.	SEA Scoping Report.
Stage 3: Identification, Prediction, Evaluation and Mitigation of Potential Effects **Current SEA Stage**	Within the context and parameters identified at the Scoping Stage, identification and evaluation of likely significant effects of the draft CWS is carried out, including consideration of alternatives and determination of measures to mitigate and monitor residual effects.	SEA Environmental Report
Stage 4: Consultation, Revision and Post-Adoption	Consultation with statutory consultees and the public. This may require changes to the CWS in light of responses. Statement on how the SEA and consultation process has influenced the final CWS. The statement is required to include an environmental monitoring plan – this is intended to provide feedback on significant environmental effects. This will also aid any future review / revision of the CWS and the SEA.	SEA Statement. Implementation of the monitoring programme.

NTS 1.4 Development of the CWS and environmental assessments

The development of the draft CWS is being undertaken alongside the assessments undertaken for SEA, and also the other assessment required for the strategy which are reported separately. A Natura Impact Statement (NIS) has been prepared to support the Appropriate Assessment of the draft CWS having regard to the requirements of the EU Habitats Directive and EU Birds Directive.

This approach allows, where possible, for the CWS proposals to be informed by constraints and opportunities for improvement identified throughout the assessment process.

Figure NTS 1.2 outlines the key stages of the development process for CWS and how its development is integrated with the SEA and AA. The Draft CWS has now been published for consultation alongside this Draft SEA Environmental Report and Draft AA Natura Impact Statement (NIS).

Following the public consultation on these documents, the final CWS will be published alongside, as appropriate, an SEA Statement including a Monitoring Plan and an AA Conclusion. Each will detail how the consultation process influenced the development of the final Strategy and how it will be monitored throughout its implementation to ensure environmental and social effects are mitigated or avoided, where possible.

The draft CWS has been developed iteratively to the environmental assessments undertaken as illustrated in Figure NTS 1.2

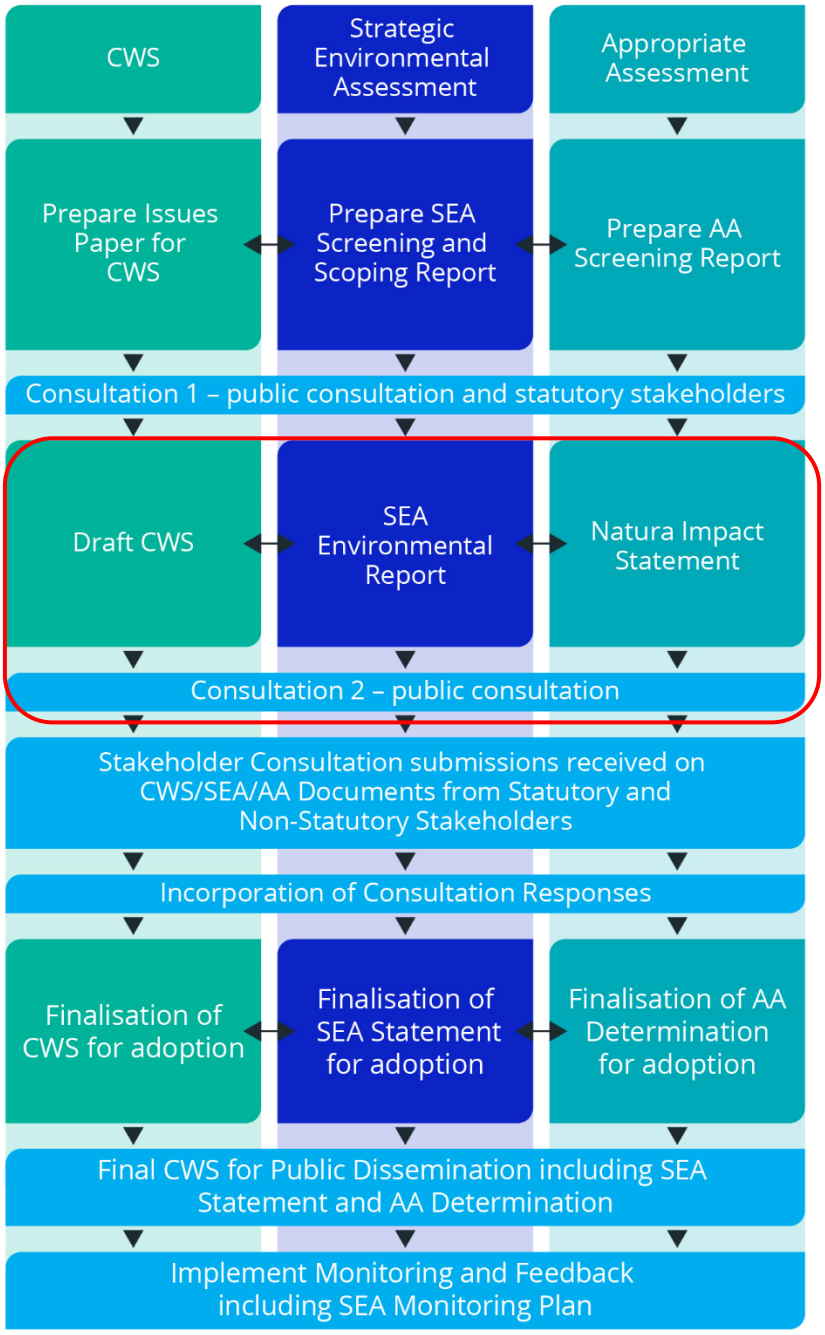

Figure NTS 1.2 Development of CWS with the Environmental Assessments

NTS 2 Relevant Plans, Programmes and Policies

NTS 2.1 Review of policy and plans

A review of other policies, plans, and programmes was conducted as part of the Strategy development and SEA for CWS. This review considered how the proposed Strategy relates to the objectives and requirements in these other documents, so that they are taken into account appropriately and can influence the draft CWS. This was an important part of setting the context for the SEA. The review process has informed the scope of the SEA, the focus for identifying the baseline environment and the development of the SEA objectives. Key influences identified at the international, national and regional level include:

- Water Framework Directive and River Basin Management Plan (RBMP) (2024)
- Urban Wastewater Treatment Directive Recast
- Wastewater Discharge (Authorisation) Regulations 2007 (as amended 2024) and European Union (Waste Water Discharge) Regulations 2020
- European Communities Environmental Objectives (Surface Water) Regulations 2009
- Bathing Water Regulations
- Floods Directive
- Marine Planning
- Climate Action and Low Carbon Development (Amendment) Act 2021
- National Adaptation Framework and Sectoral Adaptation Planning
- 4th National Biodiversity Action Plan 2023-2030
- EU's Nature Restoration Law
- EU Soil Strategy for 2030
- Circular Economy and Miscellaneous Provisions Act 2022
- The Planning and Development Act 2024
- National Development Plan Review 2025
- National Planning Framework 2025
- Regional Spatial and Economic Strategy (RSES) for the Southern Region of Ireland
- Uisce Éireann Water Services Strategic Plan 2050

NTS 2.2 Hierarchy of Policies and Plans

A comprehensive list of national and regional plans, as well as the county, local level and transboundary plans, is provided in the SEA Environmental Report. Documents considered also include those recommended through the SEA scoping consultation process as outlined in the SEA Environmental Report, Section 4. This high-level review provided a basis for developing the SEA objectives, identifying the influences on the future baseline environment and identifying the plans, programmes and policies that could potentially interact with the implementation of CWS so that these could also be considered as part of the assessment.

Figure NTS 2.1 identifies how the CWS relates to the key national, regional, and local level plans, policies and strategies.

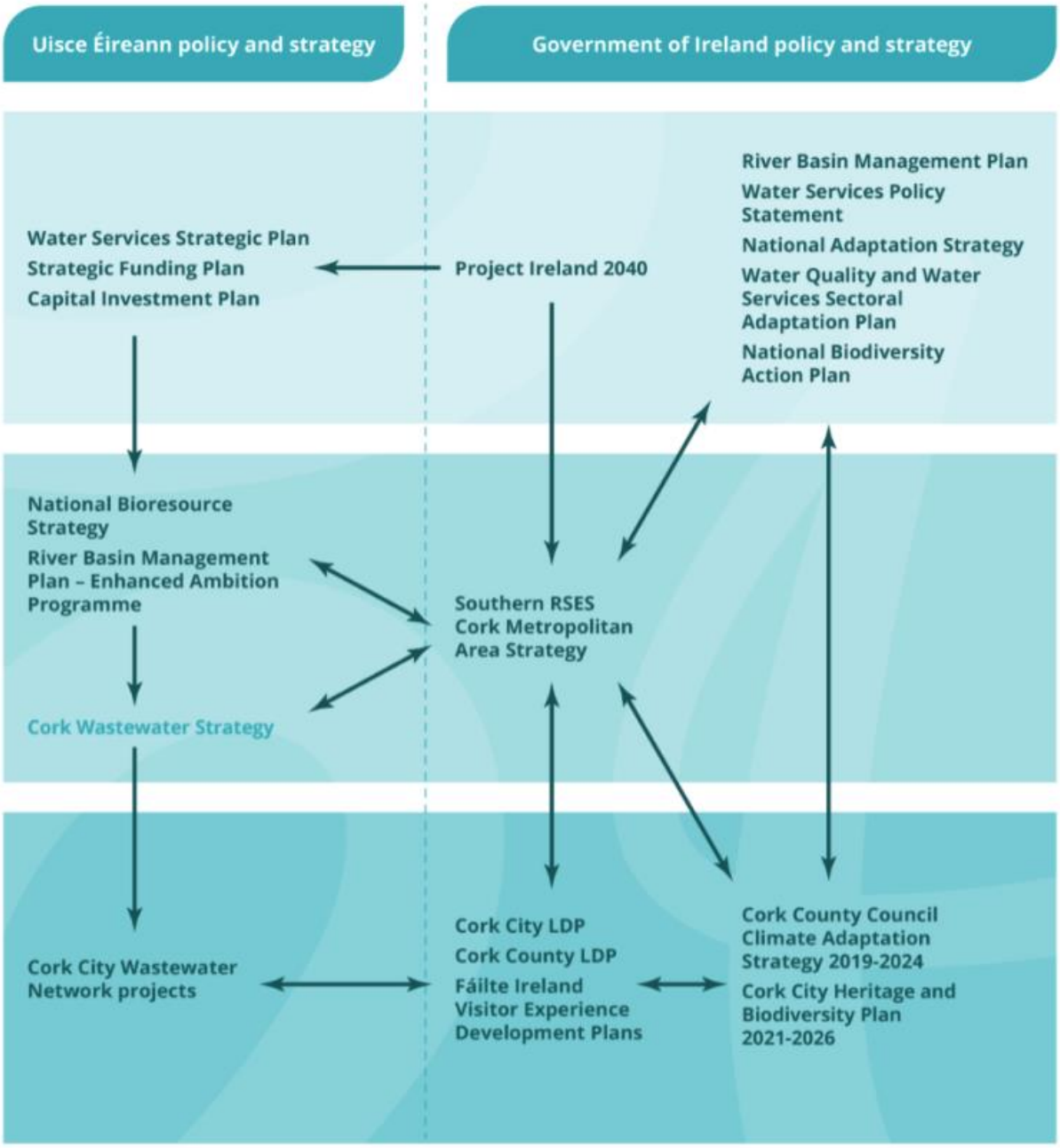

Figure NTS 2.1 Hierarchy and interaction of plans and projects

NTS 3 Consultation

NTS 3.1 Purpose of Consultation and Engagement

Public consultation and stakeholder engagement is a key element in ensuring stakeholders, including the statutory Environmental Authorities, and members of the public have an opportunity to contribute to the development of plans and programmes in Ireland.

NTS 3.2 Consultation 1

Consultation undertaken to date includes Consultation 1 with Key stakeholders, UÉ regulators and statutory bodies on Issues Paper, SEA Scoping Report and Appropriate Assessment Screening for eight weeks in the Summer of 2024.

In line with Article 9 (5) of the SEA Regulations (S.I. No. 435 of 2004), a SEA Scoping Report was issued to the following statutory Environmental Authorities for their review and comment:

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

In addition, a copy of this SEA Scoping Report was published online.

Feedback received on the SEA Scoping Report and the AA Screening Report, has been reviewed and taken into account for the preparation of the Draft CWS, SEA Environmental Report and NIS. The issues raised and the response to them are summarised in the SEA Environmental Report in Section 3 and the detailed consultation responses are provided in the draft CWS, Appendix 7.

NTS 3.3 Consultation 2

Consultation 2 is a public consultation scheduled for January 2026 and will run for a minimum of eight weeks. The purpose of the statutory consultation is to provide an opportunity to provide feedback on the draft Cork Wastewater Strategy, SEA Environmental Report and NIS. A road map for the consultation process is provided in Figure NTS 3.1 below.

Figure NTS 3.1 Consultation Roadmap

NTS 4 Scope of the Assessment and Baseline Environment

NTS 4.1 Scope of the Assessment

The SEA environmental baseline information covers the following environmental topics:

- Water Environment;
- Population, Economy, Tourism and Recreation, and Human Health;
- Climate Change;
- Biodiversity;
- Material Assets;
- Landscape, Townscape and Seascape;
- Cultural Heritage – Archaeological and Architectural;
- Geology and Soils;
- Air Quality;
- Noise and Vibration; and
- Transboundary Environment.

NTS 4.2 Key assumptions for assessment

Geographical scope - The core study area extent is as shown in Figure NTS 4.1 and covers the CMA including the sub catchment areas identified and the Cork Harbour and Cork Outer Harbour WFD waterbodies. Zone of influence for European designated sites additionally including those located partially or fully outside of the Core study area which, by applying the "source-pathway-receptor" model, have been determined to have potential impact pathways connecting elements of the CWS to European sites in view of their conservation objectives (The European sites assessed as within the zone of influence for the AA screeening are identified in the SEA Environmental Report in Section 5.11).

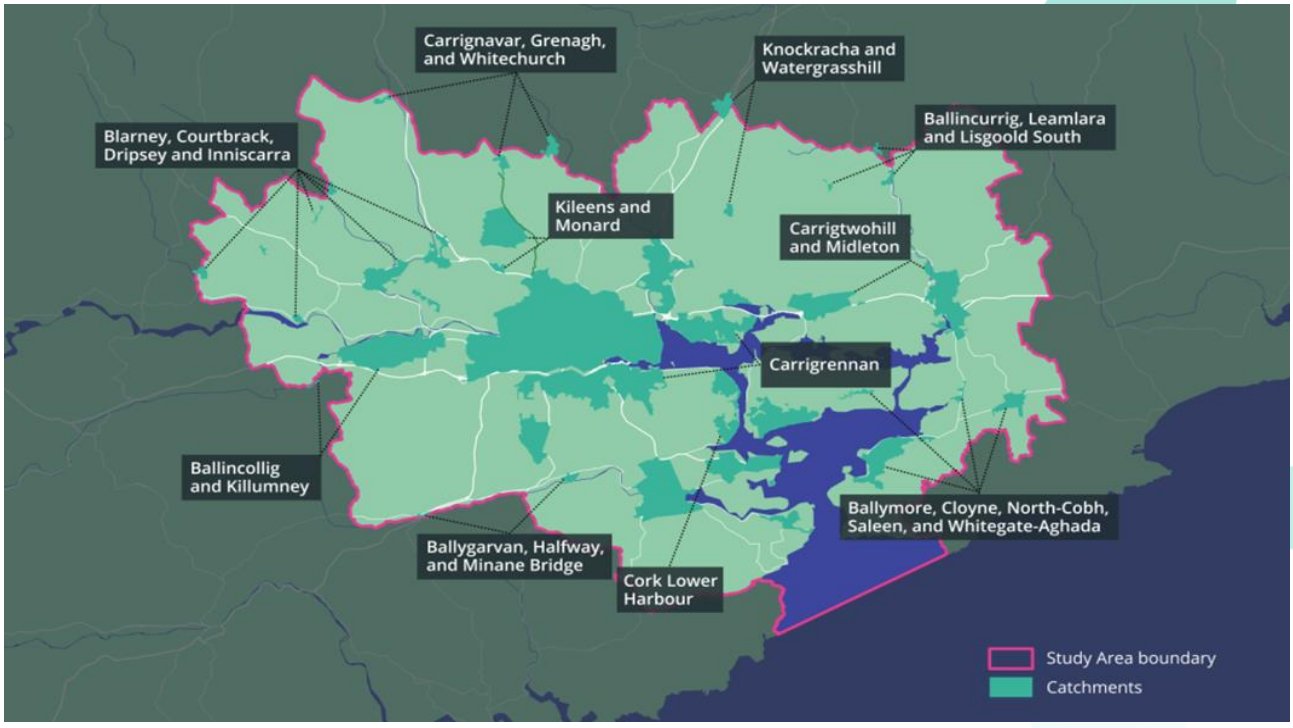

Figure NTS 4.1 CWS Study Area and sub catchment locations

The Zone of influence for WFD water bodies is based on the surface water hydrometric modelling area and used to identify the relevant WFD water bodies within and outside the Core study area for the assessment

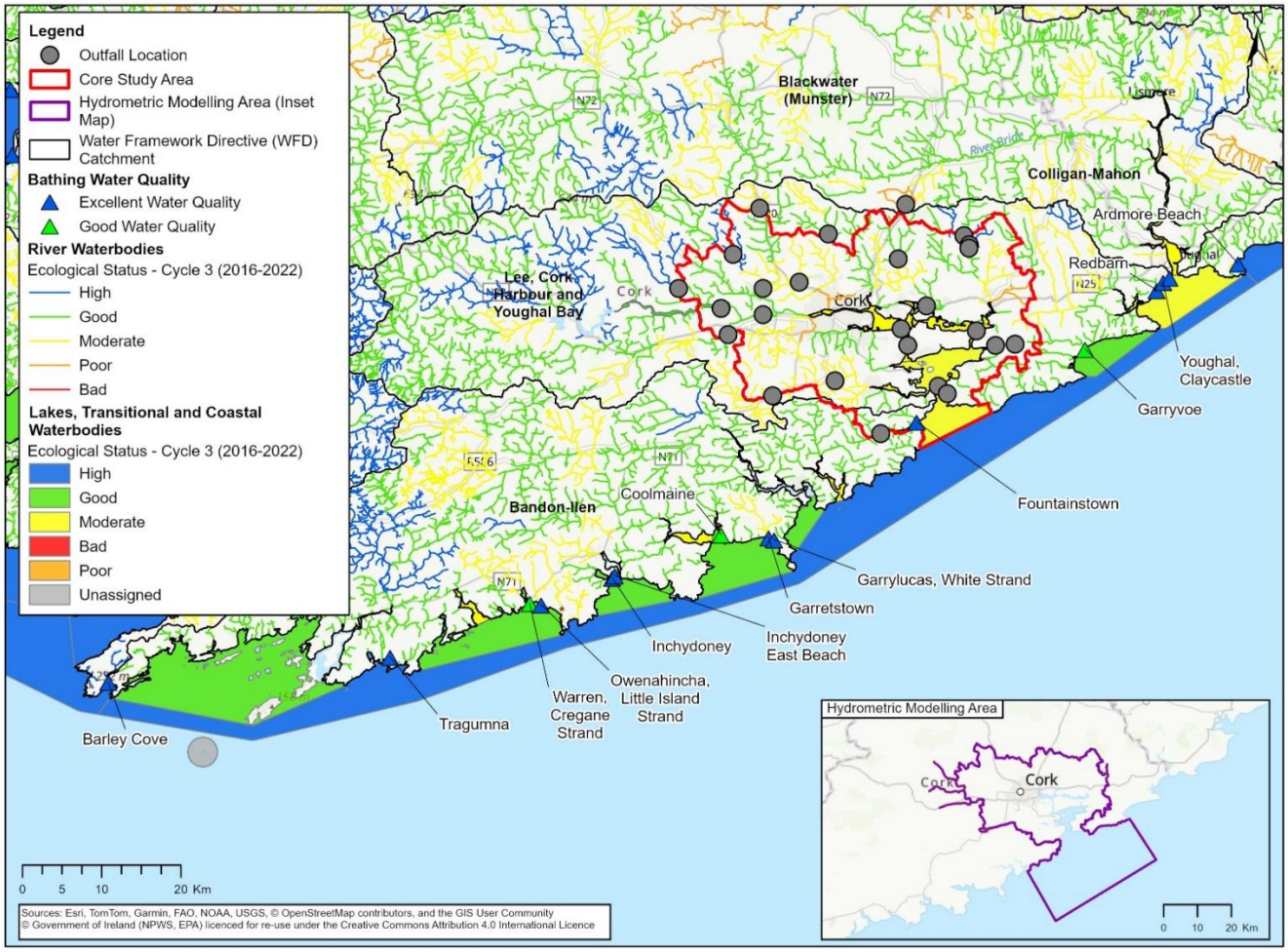

Figure NTS 4.2 Core Study area, WFD Catchments and Hydrometric Modelling Area

The temporal scope for the SEA is the period between 2025 and 2080. The draft CWS considers this time period including longer term design horizon years from 2055 to 2080; Options proposed in the draft CWS will support the delivery of these longer term solutions. The long term horizon does create a challenge in establishing a robust environmental baseline this far into the future, however, the CWS will be revised and updated on a regular basis and the SEA assessment will be revised and updated alongside the future iterations of the CWS.

NTS 4.3 Environmental Baseline Information

|The SEA Environmental Report section 5 describes information on the existing baseline environment including:

- Description of the existing baseline environment – the baseline is an outline of the current situation or condition drawn from available information, which provides a benchmark against which environmental effects of proposals can be assessed.
- Future trends – the likely future trends and the basis for the potential evolution of the existing baseline environment in the absence of the CWS is set out. In addition Water Quality Modelling undertaken for the freshwater and marine environments have modelled project impacts on water quality over the 2030 to 2080 time horizons without the draft CWS proposals in place.

- Key considerations for the development of CWS and undertaking SEA – this summarises the key points to be considered from the review of the existing baseline environment most relevant to the development of CWS, including challenges and opportunities, to help focus the environmental assessment and inform the SEA objectives.

NTS 4.4 Information Sources

A wide range of publicly available sources of information are used as a basis for identifying the baseline environment including, web-based searches, published reports and Geographic Information Systems (GIS) mapped data. These sources, along with Uisce Éireann's own data, are referred to in the SEA Environmental Report. Key general sources used for the review of the existing baseline environment included:

- Ireland's State of the Environment Report, EPA 2024
- The EPA https://gis.epa.ie/EPAMaps/, https://enviromap.ie/, and https://gis.epa.ie/EPAMaps/SEA;
- The Central Statistics Office (CSO) https://www.cso.ie/en/index.html;
- Geological Survey Ireland https://www.gsi.ie/en-ie/data-and-maps/Pages/default.aspx;
- The National Parks and Wildlife Service (NPWS) https://www.npws.ie/; and
- The European Environment Agency (EEA) https://www.eea.europa.eu/.

NTS 4.5 High Level Baseline Environment Trends

The assessment takes account of the EPA's latest State of the Environment Report[3] which provides:

- An assessment of trends, challenges and actions for air, climate change, noise, water, marine, nature, land use and soil;
- Detailed integrated assessments of key economic sectors: transport, energy, agriculture, industry and the circular economy and of the interactions between human health and the environment.; and
- An in-depth assessment of Ireland's performance in the area of environmental policy implementation and includes an Environmental Scorecard for Ireland across five key environmental themes: Climate, Air Quality, Nature, Water and Waste.

The following areas identified as challenges to address across Ireland within the State of the Environment Report (SOER) are environmental issues particularly pertinent to development of the CWS:

- Climate adaptation and water resilience: high greenhouse gas (GHG) emissions continue, and the scale and pace of GHG reductions must accelerate to meet 2024 Climate Action Plan targets.
- Water: deteriorating water quality trends over the last 20 years, particularly for coastal waters and rivers.
- Biodiversity: deteriorating protected habitat trends, with 85% of EU protected habitats having unfavourable status. Trends for EU protected species are mixed, however freshwater species are most at risk and some freshwater species are under threat.

Waste, soil health and the circular economy (including the EU Soil Strategy's aims to achieve good soil health by 2050): these aspects also support carbon, water quality and biodiversity, where further action is needed to meet long-term objectives and targets. Further detail regarding the baseline environment for each of these topic areas is provided in the baseline topic sections below.

[3] Environmental Protection Agency (EPA). 2024. Ireland's State of Environment Report 2024 Accessed: March 2025. Available from: https://www.epa.ie/our-services/monitoring--assessment/assessment/state-of-environment-report-/

These key challenges of relevance to the CWS also directly link to the following four UN Sustainable Development Goals (SDG):

- **SDG 6** Clean Water and Sanitation: Ensure availability and sustainable management of water and sanitation for all;
- **SDG 13** Climate Action: Take urgent action to combat climate change and its impacts;
- **SDG 14** Life Below Water: Conserve and sustainably use the oceans, seas and marine resources for sustainable development; and
- **SDG 15** Life On Land: Protect and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Significant population increase is anticipated over the coming decades, which is an important consideration for wastewater treatment, and therefore relevant for the water environment including compliance with the Water Framework Directive and SDGs 6 and 14.

NTS 4.6 Consideration of Transboundary Effects

No transboundary effects are anticipated due to the distance involved between the CWS SEA study area and other nations (Northern Ireland approximately 240 km). There are also no shared WFD catchments between the draft CWS and Northern Ireland. Transboundary effects are therefore scoped out of further assessment.

NTS 4.7 Baseline Topic Interactions, Issues and Opportunities

Table NTS 4.1 summarises the key issues and opportunities for the SEA topics and takes account of the SEA scoping consultation.

Table NTS 4.1 SEA Topics, Issues and Opportunities

SEA topic	Scope
	Matters for consideration
Water Environment	**Challenges**: Water pollution affecting fresh, estuarine and coastal waters from treated and untreated (stormwater or septic tank) discharges. New and upgraded infrastructure requirements to meet needs and improve resilience. **Opportunities**: Continued investment to reduce pressure and achieve environmental improvements. Targeted and wider catchment based actions to improve water quality, ecosystems services and resources and use of nature-based solutions.
Population, Socio-economics	**Challenges:** Population growth with implications for level of demand for wastewater services. **Opportunities:** Investment in wastewater treatment and catchment management plans will support growth with improved water quality with wider social and environmental benefits
Human Health and wellbeing	**Challenges**: Access to, and quality of, natural environment including rivers, lakes, canals, coastal areas, bathing waters, marine and freshwater fisheries and shellfish waters is important for local economies, tourism, recreation and wellbeing. Construction and operational nuisance from noise, air pollution and traffic generation and from wastewater treatment plant odour. **Opportunities:** Investment in wastewater treatment and catchment management plans will support improved water quality with wider social and environmental benefits. Opportunities to reduce nuisance effects from wastewater treatment odour

SEA topic	Scope
	Matters for consideration
Climate Change Adaptation and Mitigation	**Challenges**: Changes to rainfall patterns, temperature, seal level rise and increase frequency of weather events affecting the environment and risks to infrastructure and services. Increased emissions associated with construction and greater energy use to accommodate growth **Opportunities**: Support environment resilience by reducing pressure from wastewater discharges and avoiding exceeding sustainable abstraction thresholds and planning for drought conditions. Making infrastructure and services more resilient to extreme events. Potential to improve energy efficiency and to increase use of renewable sources and reduce greenhouse gas emissions from sludge and overall contribute to meeting
Biodiversity	**Challenges**: Impacts from wastewater discharges to waterbodies – pollution potentially affecting aquatic ecology, fresh water estuarine and marine. New and upgraded infrastructure – plants and pipelines with potential for habitat loss, fragmentation, disturbance and pollution. **Opportunities**: Reduce pollutant loads and pressure on aquatic environment from abstraction, opportunities to remove barriers for fish/eel migration or provide passes. Biodiversity no net loss and potential for net gain including benefits from nature-based solutions and catchment management actions.
Landscape, Townscape and Seascape	**Challenges**: Infrastructure development and construction work can have impacts on visual amenity and landscape, townscape or seascape depending on location. Wastewater discharges, storm water overflows and pollution can lead to algal blooms also affecting visual amenity such as litter. **Opportunities:** Sensitive siting and construction of new infrastructure, improvements to the wastewater discharge and support for improving water quality to benefits.
Cultural Heritage	**Challenges**: Infrastructure development and construction work can have impacts on cultural heritage and archaeology and architecture either through direct loss or impacts on their settings. River and coastal heritage structures and sites in particular. **Opportunities**: Sensitive siting and construction of new infrastructure actions supporting wetland and soil conservation could also help conserve archaeological interest.
Geology and Soils	**Challenges**: Potential impacts on designated geological sites of interest from infrastructure construction and soil loss. **Opportunities**: Potential for nutrient recovery and reuse of sewage sludge in agriculture supporting soil health and circular economy principles. Catchment management and nature-based solutions aimed at improving raw water quality can support soil health with related benefits for water retention and water quality and carbon sequestration. Wetland restoration and peat and soil conservation measure can help to reduce soil erosion, polluting run off and flash flooding.
Air quality	**Challenges**: Air pollution from construction works, vehicle movements and operations including odour from wastewater treatment works. **Opportunities**: Construction air emissions can be managed through good construction practice, fuel/ energy policy. Wastewater treatment improvements, higher design standards and operation practice can reduce odour.

SEA topic	Scope Matters for consideration
	Construction related emissions are considered local issues addressed through application of appropriate standards at lower programme and project levels and are therefore considered generally as potential nuisance or disturbance effects under population and health.
Noise and vibration	**Challenges**: Noise and vibration from construction works and operations including vehicle movements. **Opportunities**: Construction noise can be managed through good construction practice and appropriate design standards and siting to take account of sensitive receptors. These are considered local issues addressed through application of appropriate standards at lower programme and project levels and are therefore considered generally as potential nuisance or disturbance effects under population and health.
Material Assets	**Challenges**: Ageing wastewater infrastructure assets needing repair maintenance and replacement. Waste management challenges for sewage sludge and water treatment residuals to avoid pollution and minimise disposal of waste to landfill. **Opportunities**: Potential to adopt circular economy principles and potential for waste resource recovery through use on land and innovation for use for renewable energy/fuel.
Interrelated aspects	**Opportunities:** potential multiple environmental, social and local economic benefits from improvements to wastewater treatment.

In accordance with the SEA Directive, it is important to recognise the interrelationships between environmental topics, as changes to one environmental aspect can directly and indirectly influence others.

Table NTS 4.2 below illustrates the potential interrelationships between the environmental which have been considered further as part of the environmental assessment of the draft CWS. All SEA topics are considered relevant to some degree related to potential positive or negative impacts from the implementation of the CWS.

Table NTS 4.2 Interrelated SEA topics

PopN, Econ, Rec, Health	Y						
Climate Change	Y	Y					
Biodiversity	Y	Y	Y				
Material Assets	Y	Y	Y	Y			
Landscape	Y	Y	Y	Y	Y		
Cultural Heritage	Y	Y	Y	Y	Y	Y	
Geology and Soils	Y	Y	Y	Y	Y	Y	Y

Air Quality	N	Y	Y	Y	N	N	N	Y	
Noise and Vibration	N	Y	N	Y	Y	N	Y	N	N
SEA Topic	**Water Environment**	**PopN, Econ, Rec, Health**	**Climate Change**	**Biodiversity**	**Material Assets**	**Landscape**	**Cultural Heritage**	**Geology and Soils**	**Air Quality**

NTS 5 SEA Assessment Methodology

NTS 5.1 Strategic Environmental Assessment Objectives

During the scoping stage of the SEA process Strategic Environmental objectives (SEA Objectives) and assessment criteria were developed based on the key considerations from the baseline review and the policy, plan and programme review. These objectives were consulted on through the SEA Scoping Report and have been amended to reflect comments received. These SEA Objectives have provided the framework for assessing the alternative plan approaches and recommended plan proposals. The SEA Objectives and assessment criteria are provided in Table NTS 5.1.

Table NTS 5.1 SEA Objectives for the Draft CWS Assessment

SEA topic	SEA Objectives
Water Environment	*Water quality and quantity* Prevent deterioration of the WFD status of waterbodies with regard to quality and quantity due to discharges of wastewater from treatment plants. Contribute towards the "no deterioration" WFD condition target and restore and improve waterbody status to meet WFD and RBMP objectives related to the provision of wastewater services. *Flood risk* Protect and, where possible, reduce risk from flooding as a result of Uisce Éireann's provision of wastewater services.
Population, Economy, Tourism and Recreation Human Health and Wellbeing	*Population, Economy and Tourism* Protect and contribute to supporting sustainable economic and population growth, with (i) preventing restrictions to recreation and amenity facilities and (ii) protecting and enhancing freshwater and marine fisheries and shellfish protected areas. *Human health and wellbeing:* Protect and contribute to enhancement of human health and wellbeing related to the provision of wastewater services.
Climate Change	*Climate change mitigation* Minimise contributions to climate change emissions to air (including greenhouse gas emissions) through energy efficiency, consideration of ecosystem services including carbon sequestration, water reuse and conservation - related to the provision of wastewater services. *Climate change adaptation* Take account of additional pressures on the environment due to climate change and promote measures supportive of climate change resilience related to provision of wastewater services. Take account of additional risks to wastewater services and infrastructure due to climate change and improve resilience to the effects of climate change such as to extreme weather events.
Biodiversity	Protect and enhance terrestrial, aquatic and soil biodiversity and habitat connectivity, with particular regard for European and nationally designated sites (including proposed and candidate sites and protected species). Achieve BAP commitments to No Net Loss of habitats related to provision of wastewater services.

SEA topic	SEA Objectives
Material Assets	*Resource use and waste management* Minimise resource use and waste generation from new or upgraded wastewater infrastructure and the management of sludge and residuals from treatment processes. Seek to apply circular economy principles across lifecycle decision making for resources and wastes. *Asset use* Minimise impacts on other material assets and infrastructure, and optimise use of existing wastewater assets including through capacity and upgrades of existing wastewater sites.
Landscape, Townscape and Seascape	Protect and enhance designated and valued landscapes/townscapes and seascapes and visual amenity in relation to the provision wastewater services.
Cultural Heritage – Archaeological and Architectural	Protect and enhance designated and undesignated cultural heritage assets and archaeological interest, including their condition, settings and access related to the provision of wastewater services.
Geology and Soils	Protect soils and geological heritage sites and contribute towards the appropriate management of soil quality and quantity related to wastewater services.
Air Quality	Identify and seek to apply wastewater treatment improvements, higher design standards and operation practices to minimise odour from wastewater plants.
Noise and Vibration	Scoped out - as CWS unlikely to have significant effects related to noise and vibration in terms of plan level effects but will need to be part of project level consideration for construction and operation.

NTS 5.2 Summary of Approach to the Assessment

The assessment methodology applied for the SEA of the CWS is based on the approach outlined in the SEA Scoping Report and takes account of comments received through Consultation 1.

The existing baseline conditions, future baseline trends and legal requirements within relevant plans, policies and programmes have shaped the development of the scope and objectives for this assessment.

Key guidance taken into account in the approach to the SEA includes:

- SEA pack including scoping guidance and checklists (updated 2023 and published 2024)[4];
- EPA's Developing and Assessing Alternatives in SEA (published 2015)[5];

[4] EPA. 2024. SEA Pack (Updated January 2023). Accessed: September 2024. Available from: https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/sea-pack.php

[5] EPA. 2015. Developing and Assessing Alternatives in Strategic Environmental Assessment (SEA). Accessed: September 2024. Available from: https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/developing-and-assessing-alternatives-in-sea.php

- EPA's Guidance on SEA Statements and Monitoring (published 2023)[6];
- EPA's Integrating Climatic Factors into SEA in Ireland – A Guidance Note (published 2019)[7];
- EPA's Good practice guidance on Cumulative Effects Assessment in SEA (published 2020)[8];
- EPA guidance 'The Tiering of Environmental Assessment – The influence of Strategic Environmental Assessment on Project-level Environmental Impact Assessment (published 2021)'[9]; and
- Good Practice Guidance Strategic Environmental Assessment in the Water Sector (published 2022).[10]

All other EPA's SEA Topic and Sector Specific Guidance11 relevant to the development to the CWS have also been used to guide and influence the SEA process.

NTS 5.3 Assessment of Significant Effects

The assessment of the effects that are expected to occur from the implementation of the CWS was based on technical judgement and knowledge of similar schemes. The significance of the effect will be determined based on the sensitivity of the receptor and the scale of the change. Using this method, a sensitive receptor (for example a European designated site) may only require a small change to be considered as a significant effect.

Alternatively, a less sensitive environment may tolerate a larger change and may therefore be judged as a minor or no effect. The effects can be beneficial or adverse as indicated by colour and by the + and – symbol and are shown in Table NTS 5.2. The effects will be assessed both before and after the identification of mitigation. The magnitude of the predicted effect will take into account the likelihood of the effect occurring, the severity of the effect and the spatial extent (i.e. how large an area, or size of population) would be affected.

[6] EPA. 2023. Guidance on SEA Statements and Monitoring. Accessed: September 2024. Available from: https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/guidance-on-sea-statements-and-monitoring.php

[7] EPA. 2019. Integrating Climatic Factors into Strategic Environmental Assessment in Ireland - A Guidance Note. Accessed: September 2024. Available from: https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/integrating-climatic-factors-into-sea-in-ireland.php

[8] EPA. 2020. Good practice guidance on Cumulative Effects Assessment in SEA. Accessed: September 2024. Available from: https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-guidance-on-cumulative-effects-assessment-in-sea.php

[9] EPA. 2021. The Tiering of Environmental Assessment – The influence of Strategic Environmental Assessment on Project-level Environmental Impact Assessment. Accessed: October 2023. Available from: https://www.epa.ie/publications/research/epa-research-2030-reports/Research_Report_391.pdf

[10] EPA. 2022. Good Practice Guidance Strategic Environmental Assessment in the Water Sector. Accessed: October 2023. Available from: https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/good-practice-guidance-water-.php

[11] EPA. n.d. SEA Topic and Sector Specific Guidance. Accessed: March 2025. Available from: https://www.epa.ie/our-services/monitoring--assessment/assessment/strategic-environmental-assessment/sea-topic-and-sector-specific-guidance-/

Table NTS 5.2 Significance of Effect and Assessment Certainty (Option Level Assessments)

Type of effect		Potential significance of effect			
Long term (>15 years)	L	Major beneficial	+++	Major adverse	---
Short term (<5 years)	S	Moderate beneficial	++	Moderate adverse	--
Permanent	P	Minor beneficial	+	Minor adverse	-
Temporary	T	Neutral	0		
Assessment certainty		Low/Medium/High			

NTS 5.4 Consideration of Alternatives

The SEA Directive requires the SEA process to identify and describe 'reasonable alternative' means of achieving the objectives of the CWS. The optioneering process for the CWS includes the following steps:

1. Identification of need
2. Develop long list of unconstrained options;
3. Course screening of unconstrained options to produce short list of constrained options;
4. Fine screening of constrained options to develop short list of options; and
5. Final assessment of short list Feasible Options, combined Feasible Approaches so that Recommended Approaches are identified.

The approach applied for environment assessment of reasonable alternatives is through the integration of environmental considerations through all the option appraisal steps as part of the iterative process of assessing and amending options or excluding options that would not meet need. Then influencing the ranking of feasible short list options and the comparison of feasible approaches and selection of the Recommended Approaches.

NTS 6 Assessment of the Draft CWS

NTS 6.1 Overview of Environmental Assessments

NTS 6.1.1 SEA Assessment Summary for the Draft CWS

The environmental assessments reported in the SEA Environmental Report address CWS at a Sub-catchment and WvTP level. The 11 Sub-catchments and the included WvTP are presented in Table NTS 6.1:

Table NTS 6.1 List of assessed Sub catchments and WvTP

Sub Catchment	Agglomerations
Sub Catchment 1	Blarney WWTP
	Courtbrack WWTP
	Dripsey WWTP
	Inniscarra WWTP
Sub Catchment 2	Kileens WWTP
	Monard
Sub Catchment 3	Carrignavar WWTP
	Grenagh WWTP
	Whitechurch WWTP
Sub Catchment 4	Knockraha WWTP
	Watergrasshill WWTP
Sub Catchment 5	Carrigrennan WWTP
Sub Catchment 6	Ballygarvan WWTP
	Halfway WWTP
	Minane Bridge (River Valley) WWTP
Sub Catchment 7	Ballincollig WWTP
	Killumney WWTP
Sub Catchment 8	Cork Lower Harbour WWTP
Sub Catchment 9	Carrigtwohill WWTP
	Midleton WWTP
Sub Catchment 10	Ballymore
	Cloyne WWTP
	North Cobh WWTP
	Saleen WWTP
	Whitegate – Aghada WWTP
Sub Catchment 11	Ballincurrig WWTP
	Leamlara
	Lisgoold North WWTP

Sub Catchment	Agglomerations
	Lisgoold South WWTP

An in-depth assessment of the current treatment capacities has been undertaken for the draft CWS, providing a comprehensive overview of the existing treatment streams and processes at the WwTPs within the CMA. This evaluation includes a high-level performance assessment for each WwTP, focusing on their compliance with current wastewater discharge licences and performance. The assessment serves as a baseline for understanding the current operational status and identifying areas requiring action.

Based on the comprehensive findings from the WwTP assessment and the detailed flow and load analysis, coupled with the population projections, timelines for proposed upgrades were identified. The timelines are crucial in relation to preventing WwTPs from exceeding their operational capacities, which could lead to a deterioration in operational efficiency and treatment quality and resulting impacts on the water environment with related biodiversity, community and economic effects.

Following the assessment of the current treatment capacities a process was followed with five options and solutions development stages and environmental consideration. Table NTS 6.2 below present the development stages of option appraisal.

Table NTS 6.2 Development Stages of Option Appraisal

Options appraisal stages	CWS assessment and development	Environmental and sustainability integration in the options appraisal process
Stage 1 Identifying the need	Considering 2030, 2055 and 2080 timelines - understanding current and future treatment and network capacity needs addressing population growth and environmental discharge requirements	Developing an understanding of environmental constraints and opportunities over the over time of the plan taking account of the likely evolution of the baseline environment without the CWS in place. Water Quality Modelling, GIS mapping, site visits and performance information, EPA compliance reports, the baseline environmental data and policy context informed this stage.
Stage 2 Long list of unconstrained options	Wide range of options for WwTP, inter catchment options and network solutions	Consideration of SEA Scoping, AA screening and Issues Paper consultation comments and review of long list options and methodology development for the environmental assessment. Feedback on opportunities on potential to incorporate NBS and catchment management measures through identification as measures to taken forward in stage 5. (Option Assessments are provided In SEA Appendix B)
Stage 3 Coarse Screening of Longlist options	Technical Feasibility assessment followed by initial environmental assessment to	High level environmental assessment part of iterative process to identify issues of concern and where impacts would be difficult to mitigate.

	remove options not considered technically or environmentally feasible – using a red, green and amber (RAG) scoring and the following criteria: • Resilience • Deliverability/flexibility • Sustainability (environmental and social)	In addition the level of uncertainty and need for additional information to inform the next stage assessment were identified and where there was a need to amend options or identify variants to address potential issues. (Option Assessments are provided in SEA Appendix B)
Stage 4 Fine screening Shortlisting of options	Multi-Criteria Analysis (MCA) Covering Feasibility, deliverability, resilience, planning, environmental and sustainability, customer and community criteria. These were scored on a 7 point scale and weighted.	The criteria were mapped against the SEA objectives and WSSP objectives and each ultimate 2080 option was scored against the range of criteria as part of the MCA. The SEA objective relevant scoring and ranking of options influenced and was compared to the overall ranking. The highest ranking options were then taken forward as potential feasible approaches for the sub catchment group consideration. (Option Assessments are provided in SEA Appendix B)
Stage 5 Final assessment of shortlisted options and option combinations	Potential feasible approaches were compared for the highest ranking 2080 options and considering the implementation steps through 2030 and 2055 to 2080 and the combined sub catchment and inter catchment interaction.	Environmental assessments from stage 4 were used to inform comparison of the Feasible Approach combinations of options. A summary of the key differences between the approaches is provided with their related impacts. The overall Recommended Approach was considered alongside deliverability and cost criteria. Recommended approaches were then assessed against the SEA objective for each WwTP, including network proposals. In combination and cumulative effects within each sub catchment were assessed and mitigation recommendations to address potential impacts and support meeting SEA objectives were identified. (Option and Approach Assessments are provided in SEA Appendix B) These assessments and recommendations were then taken forward for consideration of the overall CWS approach in this SEA Environmental Report.

Each stage and the actions or assessments results are summarised in the sections below and the options assessments are set out in SEA Appendix B in more detail.

Construction effects from the Recommended Approaches are expected to be short term duration and including within site upgrade works, within site and new site location development for pumping stations with minor to moderate temporary effects in relation to SEA objectives. Network improvements and transfer pipelines are expected to be constructed mainly within the road network and detailed routing will need to be undertaken. There is potential for local community and traffic disruption associated with these works. Good practice environmental planning and management including traffic management is expected to be applied to address these effects.

The proposed new WwTP proposed for Ballincollig will need to be subject to detailed site selection process but is likely to involve greenfield site development, with associated land take and potential for habitat loss and cultural heritage/archaeological risks. These impacts will need to be considered further and compared to the alternative transfer options as part of detailed feasibility and environmental assessments.

The proposal to construct an extension to the Carrigtwohill effluent discharge has potential for habitat impacts within the SAC will need to be considered further as part of project level assessments, detailed routing. This strategic level assessment identifies the potential for short term effects from construction but potential for long term benefits for the most sensitive Atlantic Salt Meadow habitat. These are considered in more detail in the NIS.

A summary of the environmental assessment of the Recommended Approaches in terms of long term operational effects across the time horizons for each of the WwTPs is presented in Table NTS 6.3. Individual assessments for each WwTP against the SEA objectives are provided in SEA Appendix B.

Table NTS 6.3 Summary of Environmental Assessment (Operation Phase) all Horizons

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
Sub Catchment 1	Blarney WwTP	WwTP non-compliant against WWDL currently and in the future scenario. With impact on water quality WFD and drinking water downstream abstraction, not supporting WFD objective and aquatic biodiversity.	---	2030 optimisation will support meeting WFD objectives but does not address SWO spills. 2055 decommission and transfer will have a major positive effect on the waterbody supporting achieving High Status objective and positive effect on aquatic biodiversity and potential recreational benefits and protection of drinking water abstraction downstream. The compliant continued discharge to the river before decommissioning will have neutral effects on the Water Environment and Biodiversity.	+ / 0	+++	+++
	Courtbrack WwTP	Although currently WWDL compliant, significant increase in PE will mean future non-compliance which will not support WFD objective of High Status.	---	2030 upgrade of the plant improving treatment and addressing increase in PE will contribute to keeping the watercourse at High Status as per its objective. However, currently there is no SWO on site and installation of one is not proposed for this option. Although compliant the lack of SWO may continue spills into to the river and could have some minor negative effects on the Water Environment and Biodiversity.	++ / -	++ / -	++ / -

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
	Dripsey WwTP	Because of an undersized plant expected in 2080, although currently WWDL compliant increased load and more restrictive ESDLs expected, the receiving waterbody will fail to meet the objectives set by the WFD. One SWO not compliant in 2080 scenario. Increased pollutant loads can significantly impact aquatic biodiversity.	---	Optimisation of the plant in the interim period 2030 will bring plant into compliance. Option A4 proposes a full replacement of the current infrastructure, along with an upgrade to meet increased capacity demands. This along with an additional storm storage tank at the WwTP will resolve SWO compliance and will have a positive effect on aquatic biodiversity by reducing number and volume of future spills. Bringing the WwTP and SWO into compliance and ensuring future compliance may contribute to keeping the waterbody at High Status. The compliant continued discharge to the river will have neutral effects on the Water Environment and Biodiversity.	+	++	++
					0	0	0
	Inniscarra WwTP	Currently WWDL compliant however future capacity will be exceeded. WwTP SWO is currently compliant but is at risk of non-compliance in the 2080 scenario.	--	As the plant discharges into a soakaway and the plant serves a very small agglomeration the benefits to the waterbody from the 2030 decommission would be small. Similarly, removal of the discharge may have some minor positive effect on the lake Inniscarra abstraction, supporting the protection of the drinking water supply.	+	+	+
Sub Catchment 2	Kileens WwTP	WwTP failing WWDL compliance currently and in the future scenario. Because of the conditions of an undersized plant expected in 2080 and of increased pollutant load, the receiving	---	2030 WwTP decommission and effluent transfer will have a major positive effect on the waterbody supporting achieving Good WFD Status objective and positive effect on aquatic biodiversity and potentially terrestrial biodiversity due to close proximity of pNHA sites which are part of the Blarney River and habitats	+++	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
		waterbody would be likely to fail to meet WFD objectives,		influenced by the water quality. There are potential recreational benefits.			
	Monard	The existing catchment does not have a significant wastewater network and resultingly does not have an existing wastewater treatment process that is operated by UE.	--	2030 construction of a pipeline will have a positive effect on Population and Human Health providing wastewater services to the catchment and reduce risks to the Water Environment.	++	++	++
Sub Catchment 3	Carrignavar WwTP	WwTP failing WWDL compliance currently and in the future scenario. No storm management system and no emergency overflows. Current and future scenario major negative effects on the WFD waterbody status, aquatic ecology and human health.	---	2030 WwTP decommission and effluent transfer will have a major positive effect on the waterbody supporting achieving Good WFD Status objective and positive effect on aquatic biodiversity.	+++	+++	+++
	Grenagh WwTP	Although currently compliant, future increase in PE loads will not help achieve WFD Status.	---	2030 optimisation will support meeting Good Status WFD objective. 2055 decommission and transfer will have a major positive effect on the waterbody supporting achieving Good Status objective and positive effect on aquatic	+	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
				biodiversity and potentially terrestrial biodiversity due to close proximity of pNHA sites which are part of the River Martin and habitats influenced by water quality. Potential recreational benefits. The compliant continued discharge to the river before decommissioning will have neutral effects on the Water Environment and Biodiversity.	0		
	Whitechurch WwTP	The site discharges to the Cork City Network so there is no river discharge point.					
Sub Catchment 4	Knockraha WwTP	Discharge increase over time will not support WFD High Status Objective. No storm water overflows. However, as this is a relatively small plant that discharges into a soakaway it does not have a direct outfall into river.	--	2030 decommission of the Knockraha WwTP will have a positive effect on the Water Environment and Biodiversity due to decommission of the plant and removal of discharge into the river could support waterbody achieving High Status objective. Decommissioning may also contribute to protection of the downstream freshwater abstraction and potentially terrestrial biodiversity due to proximity of pNHA sites which are part of the Glashaboy River and habitats influenced by the water quality.	++	++	++
	Watergrasshill WwTP	Because of the conditions of an undersized plant expected in 2080 and of an increased pollutant load, the option will not support meeting WFD objectives. Increased pollutant loads can significantly impact aquatic	---	2030 optimisation of the plant will bring plant into compliance having some positive effect on the waterbody. 2055 Decommissioning of the Watergrasshill WwTP will have a positive effect on the Water Environment and Biodiversity due to removal of discharge from the river. This may contribute to achieving waterbody	+	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
		biodiversity. Blackwater River SAC is located 2.5 km downstream from the discharge outfall. Quality of the WWDL non-compliant discharge will have a negative effect on the protected site.		Good Status WFD objective and have a positive effect on aquatic biodiversity due to removal of non-compliant SWO. The compliant continued discharge to the river before decommissioning will have neutral effects on the Water Environment and Biodiversity.	0		
Sub Catchment 5	Carrigrennan WwTP	Currently achieves WWDL compliance with exception of Total Nitrogen, however, increase in PE loads will not help achieve WFD Status. However, as the discharge is located within a large transitional waterbody (Lough Mahon) with high dilution rates its negative effect on the waterbody is not large in scale.	---	2030 upgrade to provide tertiary treatment and 2055 upgrade to provide quaternary treatment will support achieving WWDL compliance and WFD status objective and positive effects for population, economy and health objectives. The compliant continued discharge to Lough Mahon will have neutral effects on the Water Environment and Biodiversity.	++ 0	++ 0	++ 0
Sub Catchment 6	Ballygarvan WwTP	Future increase in PE loads will prevent achieving WFD good status. Plant WWDL not compliant in current and future scenarios. No storm tanks on site will have a worsening effect on aquatic ecology.	---	2030 WwTP decommissioning and effluent transfer will have a major positive effect on the waterbody supporting achieving Good WFD Status objective; positive effect on aquatic biodiversity and population reducing odour issues.	+++	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
	Halfway WwTP	Although plant is achieving the discharge requirements specified within its WWDL, with the exception of Total P where a number of non-compliances have occurred, future increase in PE loads and no available space for future expansion, option will not support meeting WFD objectives. A lack of emergency overflows on site will have worsening effect on aquatic ecology.	---	2030 plant optimisation and network upgrades will bring the plant to compliance and reduction in spills will have a positive effect on aquatic ecology. 2080 decommission of the plant and effluent transfer will have a major positive effect on the waterbody supporting achieving Good WFD Status objective; positive effect on aquatic biodiversity and population reducing odour issues. The compliant continued discharge to the river before decommissioning will have neutral effects on the Water Environment and Biodiversity.	++ 0	++ 0	+++
	Minane Bridge (River Valley) WwTP	Although WWDL compliant, future increase in PE loads will prevent achieving Good Status WFD objective. The storm water overflow discharges directly into the Minane river will have a worsening effect on aquatic ecology.	---	2030 removal of discharge will have a positive effect on water environment and biodiversity due to discharge being located upstream of designated and national sites and will support achieving Good WFD Status objective; have a positive effect on aquatic biodiversity and population reducing odour issues.	+++	+++	+++
Sub Catchment 7	Ballincollig WwTP	The plant is currently not compliant with WWDL requirements, increase in PE loads will prevent achieving Good Status WFD Objective	---	The construction a new greenfield WwTP, with decommissioning of the current site, will bring the Ballincollig WwTP into compliance by 2030 and should also ensure the three SWOs remain compliant in the future which will provide positive effects on the Water	++	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
		and continue to have negative effect on the aquatic biodiversity within the pNHA site downstream of the discharge.		Environment and Biodiversity. The upgrade of the new WwTP for quaternary treatment will have further positive effects on the water environment, biodiversity and human health. The compliant continued discharge to the river will have neutral effects on the Water Environment and Biodiversity.	0	0	0
	Killumney WwTP	There is an ongoing project involving the decommissioning of Killumney WwTP for treatment at Ballincollig WwTP as part of Small Towns and Villages Growth Programme to enhance wastewater infrastructure in smaller urban areas.	---	2080 decommissioning of the plant and effluent transfer will have a major positive effect on the waterbody supporting achieving Good WFD Status objective and positive effect on aquatic biodiversity. The compliant continued discharge to the river before decommissioning will have neutral effects on the Water Environment and Biodiversity.	+++ 0	+++ 0	+++
Sub Catchment 8	Cork Lower Harbour WwTP	Although WWDL compliant, future increase in PE loads will prevent achieving Good Status WFD objective. However, as the discharge is located within a large coastal waterbody (Cork Harbour) with high dilution rates its negative effect on the waterbody is not large in scale.	--	The 2030 upgrades to the Cork Lower Harbour WwTP capacity (Option A2) will maintain compliance with the WWDLs. The compliant continued discharge to Cork Harbour will have neutral effects on the Water Environment and Biodiversity.	+ 0	+ 0	+ 0

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
Sub Catchment 9	Carrigtwohill WwTP	The current system does not meet the P Emission Limit Values (ELV) limit and future increase in PE loads will prevent achieving Good Status WFD objective. The discharge is located within designated sites and upstream of sensitive habitats and negative effect on water environment and biodiversity will continue into the future.	---	Optimisation of the plant (Option A1) will bring plant into compliance with the projected ESDL's at the discharge location which may contribute to the waterbody achieving WFD Status Objective. Extending the existing outfall by approximately 3.5km (2055) will help protect sensitive habitats within the designated site. The compliant continued discharge will remain within designated sites and will have neutral effects on the Water Environment and Biodiversity.	++ 0	++ 0	++ 0
	Midleton WwTP	Site non-compliant against WWDL currently and in the future scenario will continue to have negative effect on water environment. Spills from non-compliant SWOs will continue to have negative effects on aquatic biodiversity.	---	The 2030 (Option A2) and 2080 (Option A4) upgrades to the WwTP will have a positive effect on water environment and biodiversity ensuring WWDL compliance supporting Good Status Objective. Positive effect on biodiversity through installation of complaint SWOs and reduction of spills. The compliant continued discharge to North Channel Great Island will have neutral effects on the Water Environment and Biodiversity.	++ 0	++ 0	++ 0
Sub Catchment 10	Ballymore	The existing catchment does not have a significant wastewater network and resulting does not have existing wastewater treatment infrastructure operated by UE with negative	---	Option A6 will provide a better treatment efficiency and by not building a new WwTP plant and a new discharge will be a better outcome for the local waterbody, reducing impact on customers and the public in the local area, reducing biodiversity risks to the environment.	+++	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
		effects on local communities and human health.					
	Cloyne WwTP	Site non-compliant against WWDL currently and in the future scenario. With impact on water quality WFD and drinking water downstream abstraction, not supporting WFD objective and aquatic biodiversity. Discharge located upstream of Shellfish waters, European and national designates sites will continue to have negative effects in the future.	---	The 2030 (Option A3) and 2080 (Option A4) upgrades to the WwTP will have a positive effect on water environment and biodiversity ensuring WWDL compliance supporting Good Status Objective and population reducing odour issues. The compliant continued discharge to the river will have neutral effects on the Water Environment and Biodiversity.	+	+	++
					0	0	0
	Saleen WwTP	Although WWDL complaint the existing wastewater treatment process is currently performing very poorly and will increases in PE loads will prevent achieving Good Status WFD objective. Lack of storm storage and discharge into a SPA and pNHA will continue to have a negative effect on sesnsitive habitats.	---	Removal of discharge (2030) will have a positive effect on water environment and aquatic biodiversity supporting achieving Good WFD Status objective and protecting mudflat and salt marsh habitats within the designated sites.	+++	+++	+++
	North Cobh	Both organic and hydraulic capacities shall be exceeded, and the existing assets will	---	WwTP decommission (2055) and removal of discharge will have a positive effect on water environment and aquatic biodiversity.	0	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
		surpass their service life after 2055, although existing wastewater treatment process is WWDL complaint.					
	Whitegate – Aghada WwTP	Future increase in PE loads and ack of emergency overflows upstream (or within) the WwTP will have a negative effect on water environment preventing achieving WFD Good Status Objective and biodiversity due to spills. However, as the discharge is located within a large coastal waterbody (Outer Cork Harbour) with high dilution rates its negative effect on the waterbody is not large in scale.	--	The 2030 (Option A2) and 2080 (Option A4) upgrades to the WwTP will have a positive effect on water environment and biodiversity ensuring WWDL compliance supporting Good Status Objective. Positive effect on biodiversity through installation of complaint SWOs and reduction of spills. The compliant continued discharge to Outer Cork Harbour will have neutral effects on the Water Environment and Biodiversity.	+	+	++
					0	0	0
	Leamlara	The existing catchment does not have a significant wastewater network and resulting does not have existing wastewater treatment infrastructure operated by UE having negative effects on local communities.	---	Option A6 will provide a better treatment efficiency and by not building a new WwTP plant and a new discharge will be a better outcome for the local waterbody, reducing impact on customers and the public in the local area, reducing biodiversity risks to the environment.	+++	+++	+++

Sub Catchment	Agglomeration	Without draft CWS Solution	2030 to 2080	With draft CWS Recommended Approach	2030	2055	2080
	Lisgoold South WwTP	Although WWDL compliant, future increase in PE loads will prevent achieving Good Status WFD objective. Site performance at Lisgoold South as at the time of the site visit the WwTP was not operational as it was undergoing upgrades and raw wastewater was discharged directly in the Owenacurra river.	---	The 2030 (Option A2) and 2080 (Option A4) upgrades to Lisgoold South WwTP will have a positive effect on water environment and biodiversity ensuring discharge is treated and WWDL compliant supporting Good Status Objective. Ensuring discharge compliance will also support protection of the drinking water supply. The compliant continued discharge to the river will have neutral effects on the Water Environment and Biodiversity.	+	+	++
					0	0	0

NTS 6.2 Summary of the Draft CWS SEA Assessment

The overall draft CWS Recommended Approach is presented in Figure NTS 6.1 with WFD waterbody status, high objective rivers and environmental constraints identified.

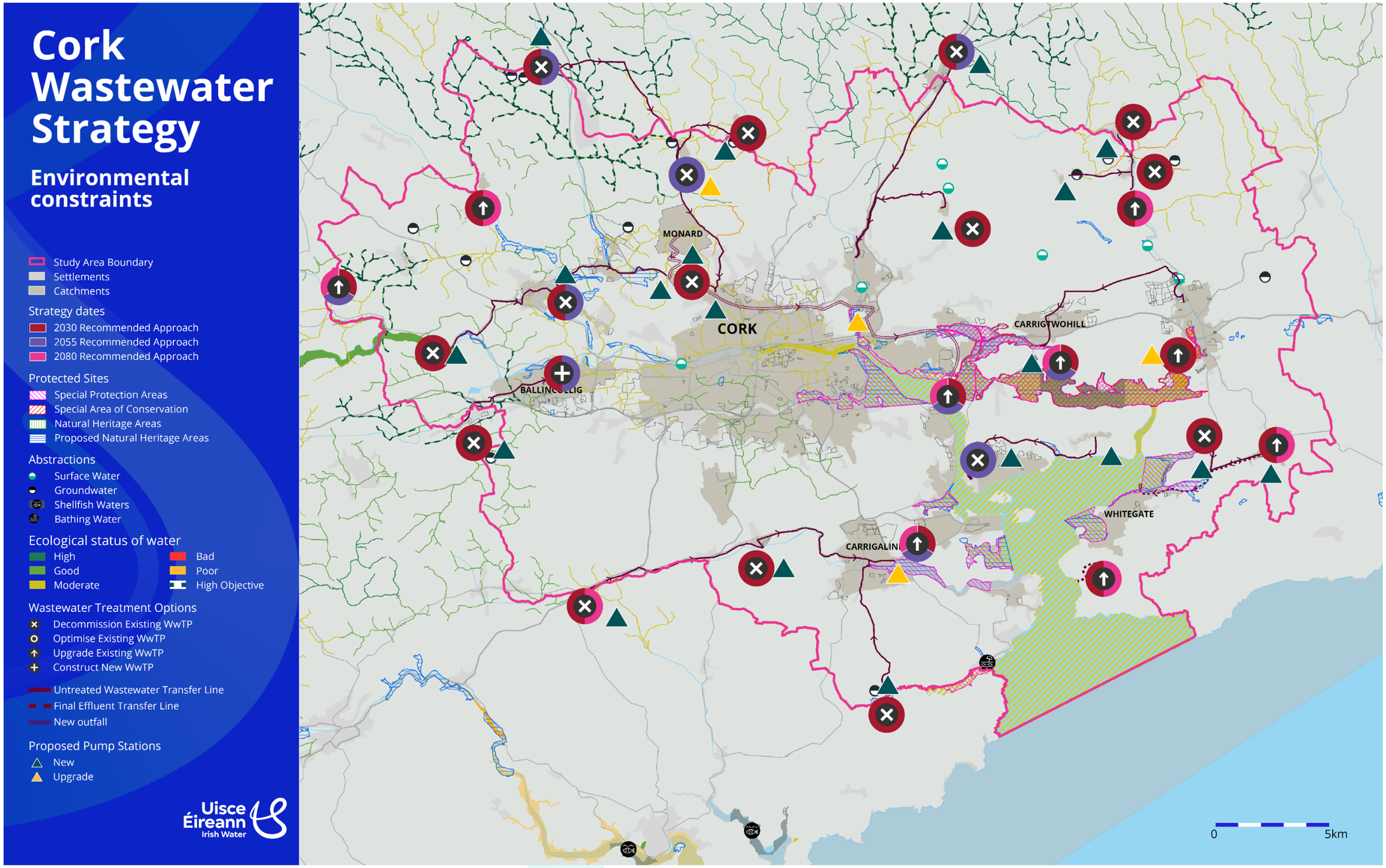

Figure NTS 6.1 Draft CWS overall Recommended Approach with WwTP site proposals with environmental constraints

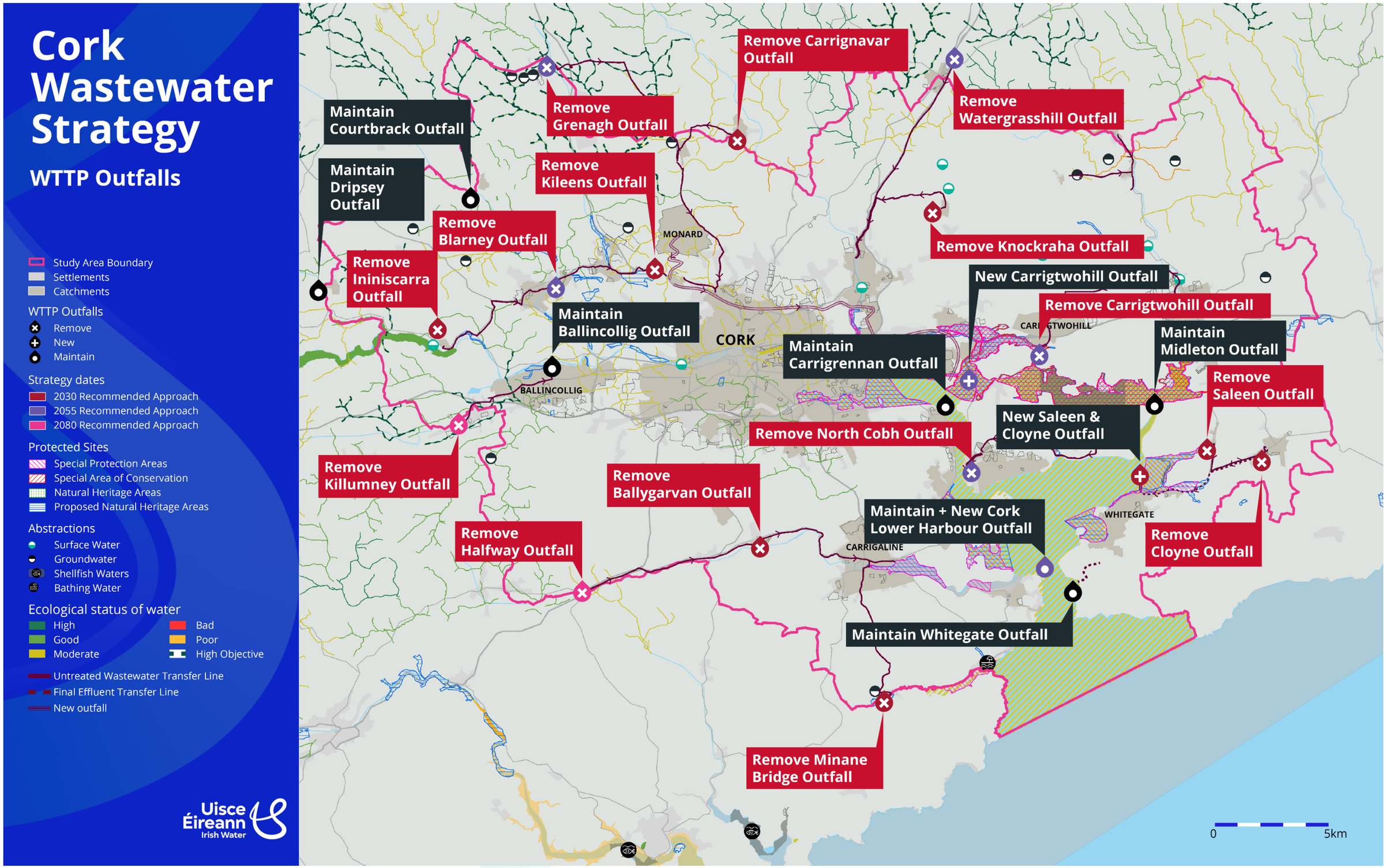

Figure NTS 6.2 Draft CWS overall Recommended Approach with the proposals for WwTP Outfalls with environmental constraints

A summary environmental assessment of the draft CWS proposals as a whole against the SEA objectives is set out in

Table NTS 6.4. This includes the 'do nothing' or 'without plan' scenario and the 'with draft CWS' proposals across the time horizons considering the overall performance of the draft CWS against the SEA Objectives.

Table NTS 6.4 Environmental Assessment of current and future scenarios for the Draft CWS Recommended Approach

Key : Performance of the plan against the SEA objectives			
Likely to have overall positive effects	+	Likely to have a mixed positive and negative effects	+/-
Likely to have overall negative effects	-	Likely to have mixed neutral and negative effects	0/-
Effects are uncertain or not applicable	? or N/A	Likely to have mixed neutral and positive effects	0/+
Likely to have a neutral effect	0	Likely to have mixed neutral, positive and negative effects	0/+/-

Design Horizon	Phase	SEA Objective								
		Water Environment	PopN, Econ, Rec, Health	Climate Change	Biodiversity	Material Assets	Landscape	Cultural Heritage	Geology and Soils	Air Quality
Do nothing 2030 to 2080	Operation	--	-	-	-	-	0/-	0	0/-	-
Draft CWS 2030	Construction	0/-	0/-	-	0/-	+/-	0/-	0/-	0/-	0/-
	Operation	+	+	0/ +/-	0/ +	0/ +/-	0/ +	0	0/ +/-	0/ +

Design Horizon	Phase	SEA Objective								
		Water Environment	PopN, Econ, Rec, Health	Climate Change	Biodiversity	Material Assets	Landscape	Cultural Heritage	Geology and Soils	Air Quality
Draft CWS 2055	Construction	0/-	0/-	-	0/-	+/-	0/-	0/-	0/-	0/-
	Operation	+	+	0/+	0/+	0/+	0/+	0	0/+	+
Draft CWS 2080	Construction	0/-	0/-	0/-	0/-	+/-	0/-	0/-	0/-	0/-
	Operation	+	+	0/+	+	0/+	0/+	0	0/+	+

NTS 6.3 Mitigation Measures

Mitigation measures will be necessary to remove, avoid or reduce the impacts identified in th SEA Environmental Report section 10, including those identified in the individual Sub Catchment Recommended Approach assessments set out in Appendix B, and also as reported in the NIS Section 7 in relation to avoiding adverse effects on the site integrity of European Sites.

The CWS is one of the subsidiary Tier 2 plans that sits under Uisce Éireann's Water Services Strategic Plan (WSSP) 2050. The management of wastewater was addressed under Strategic Objective 3: Protect and Restore the Environment of the WSSP and also under Strategic Objective 4: Sustainable Services Fit for the Future. The WSSP2050 SEA identified high level actions to support the implementation of the WSSP 2050 and to manage and monitor delivery including from the Tier 2 plans. These requirements are taken into account in the mitigation and monitoring measures proposed for the draft CWS.

NTS 6.3.1 General Mitigation Measures and Principles

The various measures that may be applied to Recommended Approaches include:

- General measures (established construction best-practice, etc.) which will be applied to all options.
- Solution-specific measures (stablished and reliable measures identified to avoid specific potential effects in relation to the SEA Objectives)
- Further assessments and data collection, monitoring feedback and adaptation.
- All Recommended Approaches will be subject to project-level environmental assessment as and when they are brought forward, which will include assessments of their potential for significant environmental effects during their construction (or operation).

These assessments will consider or identify, but not be limited to:

- potential for avoiding effects through design (e.g. alternative pipeline routes, alternative technologies; micro siting);

- best practice construction measures that need to be incorporated into Recommended Approach design and/or planning to avoid or mitigate potential effects, for example, ensuring that sufficient working area is available for pollution prevention measures to be installed; and
- restrictions to construction timing (e.g. seasonal restrictions for over-wintering birds or timing to avoid conflict with other construction works affecting connected road network within same community.

Note that these measures are not exhaustive or exclusive and must be reviewed at the Recommended Approaches level and project stages, taking into account any changes in best-practice as well as project-specific survey information or studies.

Furthermore, there is also a general requirement that all lower tier plans and/or interventions arising from the implementation of the draft CWS will be required to comply with the relevant Habitats Regulations, SEA Regulation and EIA regulations and other relevant planning and consenting processes where necessary.

NTS 6.3.2 Recommended Approaches - Plan Level Mitigation Measures

Whilst the general principles described above and expanded on in the SEA Environmental Report are applicable to all the Sub Catchment Recommended Approaches as they are progressed through project-level development, certain Recommended Approaches or aspects of them will require specific measures. Plan level mitigation measures are summarised below.

- **Proactive community engagement** - supporting awareness campaigns on challenges for WwTPs and water pollution to encourage appropriate behaviours, and to support understand the improvement works proposed and long-term benefits compared to temporary disruption
- **Partnership and collaboration for catchment management**- water quality modelling identified the influence of other sources of pollution affecting water quality and aquatic biodiversity including in relation to BOD, ammonia and phosphates. These are identified where water quality modelling used 'notionally clean' concepts to identify treatment and discharge requirements. These are identified as potential areas to prioritise support for catchment management measures aimed at reducing other sources of pollution. These can provide wider environmental benefits in addition to water quality improvements such as environmental enhancement for biodiversity and flood management. The types of measures involved can improve water retention in soils, reducing nutrient run off and soil erosion. These measures can only be delivered through collaboration with other parties and landowner involvement.
- **Partnership and collaboration for network improvements -** with the local authorities in relation to new developments and urban regeneration can support the network improvements and integration of Nature based Solutions/Sustainable Urban Drainage systems with potential to provide wider environmental and community benefits.
- **Partnership and collaboration with on marine environment and fisheries –** with the Maritime Area Regulatory Authority and Sea-fisheries Protection Authority on monitoring and initiatives for protecting and enhancing resilience and quality of the transitional and coastal waters
- **Nature based Solutions (NbS**) - WwTP and network upgrades should be considered as part of detailed design the potential to include NbS as part of delivering requirements and also to including provide additional water quality and biodiversity benefits where this is identified as feasible.
- **Circular economy**/waste and sludge management**,** energy efficiency and renewable energy generation, contribution to carbon net gain targets and use of carbon calculator tools should be integrated into project development and design and operation improvements.

The sub catchment and site-specific mitigation measures incorporate the mitigation requirements identified in the NIS along with SEA mitigation measures are identified in the Section 10.5 in the SEA Environmental Report

NTS 6.4 Cumulative Assessment for the Draft CWS

NTS 6.4.1 Cumulative Effects 'Intra-Plan'

The intra-plan cumulative assessment considers potential interaction or combined effects across Sub catchments for the 2030, 2055 and 2080 horizons. The actual timing of implementation works will depend on detailed programming but the assessment assumes a worst case where works might be undertaken at the same time if occurring within the same time horizon period. This potential for interaction during construction operation or both development phases is presented in Table NTS 6.5. Within sub catchment in combination and cumulative effects are assessed as part of the assessment of individual WwTP and sub catchment Recommended Approaches presented in SEA Appendix B. This stage focuses on between sub catchment effects where interactions between sub catchments where construction, operation or both phases associated with Recommended Approach implementation may have cumulative negative or positive effects on the environment. This includes interactions where:

- Sub catchment Recommended Approaches are in proximity to common receptors such as community areas that could be affected by construction works including for transfers and network improvements and also in terms of potential beneficial effects;
- Sub catchment Recommended Approaches that will result in discharges or changes to common waterbodies resulting in either beneficial or adverse effects.

Potential sub catchment interactions identified are related to the SEA objectives and presented in Table NTS 6.5.

Table NTS 6.5 Sub catchment potential cumulative effects

Key		No interaction or negligible cumulative effects	-	Potential for adverse cumulative effects
	+	Potential for beneficial cumulative effects	+/-	Potential for mixed beneficial and adverse effects

Sub-catchment	SEA Objective								
	Water Environment	PopN, Econ, Rec, Health	Climate Change	Biodiversity	Material Assets	Landscape	Cultural Heritage	Geology and Soils	Air Quality
Sub-catchment 1 and 2		-							
Sub-catchment 1 and 7	+			+					

Sub-catchment	SEA Objective								
	Water Environment	PopN, Econ, Rec, Health	Climate Change	Biodiversity	Material Assets	Landscape	Cultural Heritage	Geology and Soils	Air Quality
Sub-catchment 5 and 9	+			+					
Sub-catchment 10 and 8	+/-			+/-					
All catchments combined	+		+/-	+					

NTS 6.4.2 Cumulative Effects 'Inter-Plan'

Plans and programmes have been reviewed to identify those that are potentially relevant to CWS. There is potential for both negative and positive combined and cumulative effects related to plans supporting growth and infrastructure development. There could be negative impacts from construction and land take on for example biodiversity, landscape, cultural heritage and geology and soils but also positive impacts related to measures to protect the environment and provide sustainable development which the draft CWS Recommended Approaches support.

The potential negative construction effects identified can be addressed through the standard construction environmental management measures proposed.

Potential mixed positive and negative impacts were identified with Uisce Éireann's NWRP Regional Water Resource Plan for the South West.

There are potential beneficial effects from removing or improving upstream WwTPs in terms of raw water quality for water treatment. Where WwTPs remain upstream of abstraction these will need to be considered in the relevant Drinking Water Safey Plans including for abstraction downstream of the proposed new plant at Ballincollig where risks will need to be assessed under the rUWWTD to determine the need for Quaternary treatment at the WwTP. Potential negative effects identified relate to possible combined construction impacts where works are concurrent and in the same area, however with standard planning and construction management approaches these effects are likely to be minor and short term.

NTS 6.5 Appropriate Assessment Summary

The NIS concluded that, based on a plan-level assessment of the draft CWS, and with implementation of appropriate mitigation for protecting European sites, there will be no adverse effects on the integrity of any European site(s), either alone or in-combination with other plans or projects as a result of progressing Recommended Approaches within the draft CWS.

As any projects that are progressed following the draft CWS will require individual environmental assessments, including, where appropriate, Environmental Impact Assessment and Appropriate Assessment in support of planning applications (where a project requires planning permission) or in support of licensing applications (for example, for new discharges). Any such applications will also be subject to public consultation. All project proposals are screened for AA as part of Uisce Éireann's standard procedures.

Furthermore, the Recommended Approach for a sub-catchment may require re-appraisal as a result of other changes such as population fluctuation, technical advances or general development around Cork Harbour. Any such changes would require environmental assessments, including, where appropriate, revisiting the SEA and Screening for AA.

NTS 7 Draft Monitoring Plan

A monitoring plan is required under the SEA regulations to provide a basis for identifying significant environmental effects during the implementation of the plan. This is required to review the predicted impacts of the CWS, and the adequacy of the mitigation measures recommended. This allows additional mitigation to be applied where required and can support an adaptive management approach.

The monitoring plan covers the integration of environmental and sustainability considerations throughout implementation of the CWS. The draft Monitoring Plan for the draft CWS is provided in Table NTS 7.1

Monitoring Plans provide a means to demonstrate the effectiveness of the adopted plan/programme approach using environmental and sustainability objectives, targets and indicators. They also permit the early identification of emerging significant effects to enable corrective actions to be taken during Plan implementation. Monitoring can also identify how a plan is supporting positive outcomes and contributing to meeting its objectives.

EPA Guidance on SEA Statements and Monitoring covering monitoring plans identifies that monitoring can help evaluate whether SEA is fulfilling its core objective of providing for a high level of protection of the environment and the promotion of sustainable development (Article 1 of the SEA Directive) and notes the following benefits:

- Potential to demonstrate the effects of implementing a plan/programme - the plan's environmental performance.
- Identifying knowledge gaps and collecting new data over time and thereby reduce uncertainties in the assessment – so that data gaps can be addressed.
- Measuring indicators over time can identify long-term positive or negative changes and trends in the environment.
- Identifying unforeseen effects or impacts that may not have been identified during the assessment.
- Identify the need for additional mitigation measures or for appropriate remedial action to be undertaken where issues are identified, as well as to inform project level assessments.
- Providing the basis to inform the review and preparation of subsequent iterations of plans/programmes.
- Supporting streamlining of future SEA processes by changing the starting point in the baseline.

The EPA guidance recommendations for monitoring include that:

- Actions are appropriately targeted and focused and relevant to the potential significant effects.
- Makes use of any existing monitoring to avoid unnecessary duplication of effort.
- Environmental monitoring is integrated into the plan implementation monitoring and review process.
- Regular reporting on monitoring and implementation is provided.
- Future plan iterations take account of monitoring findings.

The SEA monitoring is integrated into the draft CWS's overall monitoring proposals to ensure that environmental considerations are evaluated alongside other key performance measures. This process will involve assessing the environmental impacts of the plan's implementation, with a focus on the sustainability of wastewater services including the protection of ecosystems, shellfish, and bathing waters from wastewater discharges. The findings from SEA monitoring will contribute to the five-yearly reviews of the CWS and will also feed up to inform future reviews and iteration of the WSSP, as well as the annual sustainability reporting obligations reported in the Annual Report. This will ensure that the CWS remains responsive to

environmental legislation and our commitment to environmental protection and climate change mitigation and adaptation.

Table NTS 7.1 Draft Monitoring Plan Summary: indicators and targets

SEA Objective	Target	Indicator *(proposed indicators where data is available)
General (All topics)	See below	Progress implementing draft CWS Recommended Approaches and supporting measures and meeting SEA monitoring plan targets
Water quality and quantity	Implementation of Measures identified for Uisce Éireann in the RBMP and sectoral action plans Implementation of the proposed network improvements to bring SWOs into compliance and avoid out of sewer flooding Implementation of Site Spill risk assessments for all sensitive sites.	River Basin Management Plan (RBMP) Significant Pressures - Categories Urban Wastewater and urban drainage in the CMA study area. Number of non compliant SWOs in the CMA Number of Site Spill risk assessments completed for existing wastewater assets.
Flood risk	No network out of sewer flood events associated with CMA network No increase to flood risk as a result of project developments - Project level information	Number of Network flood events in the CMA Project level information from flood risk assessments
Population, Economy, and Tourism and Recreation	Performance assessment metric targets No complaints Community awareness improvement	Performance assessment metrics reported to CRU No of Recommended Approaches in progress and delivered Number of community complaints related to wastewater services in the CMA Wastewater communication/awareness programmes in the CMA Wastewater regulation compliance
Health and wellbeing	Compliance with wastewater regulations WWDA Bathing waters requirements compliance Bathing water quality requirements achieved Shellfish waters quality requirements achieved	Compliance with wastewater regulations WWDA Bathing waters requirements compliance Bathing water quality requirements achieved Shellfish waters quality requirements achieved
Climate Change Mitigation	Net zero carbon ambition for 2040	CSRD metrics and CRU performance assessment metrics related to greenhouse gas emissions for construction and operation, energy efficiency and use of renewable energy sources - for the CWS proposals

SEA Objective	Target	Indicator *(proposed indicators where data is available)
Climate change adaptation	Proposed capacity and storm water storage improvements Implemented	CSRD metrics (to be confirmed) CRU performance assessment metrics Network capacity improvements and stormwater storage increase
Biodiversity	Biodiversity net gain targets	Biodiversity net gain metrics Biodiversity conservation incorporated into decision making
	Predicted length of rivers benefiting from CWS achieved	Length of river benefiting from removed or improved discharge
	Salt marsh area near Carrigtwohill increased	Salt marsh habitat area near Carrigtwohill
	NbS opportunities considered as part of project development where relevant	No of Recommended Approached taken forward including NbS or catchment initiatives
Resource use and waste management	CSRD targets	CSRD metrics (in development) Project level information Volume of sludge generated and disposed to land/ used for energy generation/ bioresource
Asset use	CSRD targets	Volume of construction waste reused or to landfill
Landscape, Townscape and Seascape	Project level targets	Project level information
Cultural Heritage – Archaeological and Architectural	Project level targets	Project level information
Geology and Soils	Project level targets	Project level information
Air Quality	Wastewater treatment measures and new plants meeting required odour standards	No. of upgraded wastewater treatment and new plants meeting odour standards

NTS 8 Next Steps

The next step will be the review of the consultation responses. These will be taken into account in finalising the CWS.

Following the completion of the consultation and finalisation and adoption of the CWS, an updated SEA Environmental Report (including the SEA appendices), along with the SEA Statement, NIS, AA Determination and final CWS will be published with the Consultation Report online at the following website: https://www.water.ie/cws.

The subsequent SEA stage is Stage 5 the implementation of the CWS including the environmental mitigation measures, the Monitoring Plan and the review and feedback process to inform internal reviews, an interim monitoring report and a 5 yearly Iteration of the CWS.