

Autumn 2022

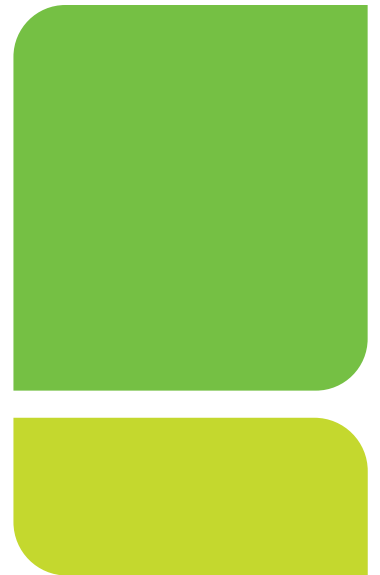


Regional Water Resources Plan—Eastern and Midlands

Natura Impact Statement

Appendix A

Appendix B



Tionscaldal Éireann
Project Ireland
2040

Data disclaimer: This document uses best available data at time of writing. Some sources may have been updated in the interim period. As data relating to population forecasts and trends are based on information gathered before the Covid 19 Pandemic, monitoring and feedback will be used to capture any updates. The National Water Resources Plan will also align to relevant updates in applicable policy documentation.

Baseline data included in the RWRP-EM has been incorporated from numerous sources including but not limited to; National Planning Framework, Central Statistics Office, Regional Spatial and Economic Strategies, Local Authority data sets, Regional Assembly data sets and Irish Water data sets. Data sources will be detailed in the relevant sections of the RWRP-EM. 2019 was selected as the base year to align with the planning period (2019-2025) of the NWRP. GIS data copyright © Ordnance Survey Ireland. Licence number EN 0094521.

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Appendix A

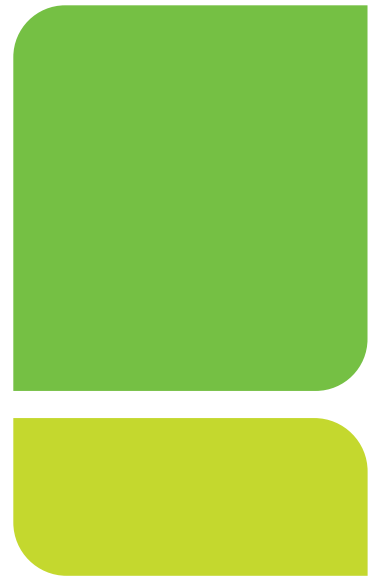
Screening Report

Autumn 2022



Regional Water Resources Plan-Eastern and Midlands

Screening for Appropriate Assessment



Tionscadal Éireann
Project Ireland
2040

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1	Introduction and Background	1
1.1	Introduction	2
1.2	Aim of this Report	2
1.3	Legislative Context for AA	2
1.4	Overlap with Strategic Environmental Assessment	4
1.5	Consultation	6
2	Development of the RWRP-EM	7
2.1	Background of the RWRP-EM	8
2.2	Scope of the RWRP-EM	9
2.3	Objectives of the RWRP-EM	9
2.4	Geographical Scale of the RWRP-EM	10
2.5	Temporal Scale	11
2.6	Transboundary Effects	12
2.7	Assessment Methodology Overview	15
3	Appropriate Assessment Methodology	17
3.1	Stages of Appropriate Assessment	18
3.2	Approach to AA of Regional Water Resources Plans	19
3.3	Guidance documents in relation to Appropriate Assessment	20
3.4	Guiding Principles and Case Law	21
3.5	Identification of European Sites	21
4	Screening	24
4.1	Screening	25
4.2	Is the RWRP-EM exempt from assessment?	25
4.3	Description of the RWRP-EM	25
4.4	Identification of European Sites within the EM region	25
4.5	Assessment of Likely Significant Effects	27
4.6	In-combination Effects	32
4.7	Screening Conclusion	32
	References	33



1

Introduction and Background

1.1 Introduction

Irish Water is developing the first National Water Resources Plan (NWRP) to identify deficiencies and need across a water supply and to develop plan level capital and operational solutions to address these issues. The NWRP has been split into two distinct phases:

Phase 1 is the Framework Plan which comprises the methodology Irish Water has used to develop the plan and an assessment of need in terms of quality, quantity, reliability and sustainability for all of Irish Water's supplies nationally.

Phase 2 of the Plan comprises four individual Regional Water Resources Plans (RWRP). Each of these Regional Plans summarises the needs for each Water Resources Zone (WRZ) in terms of quality, quantity, reliability and sustainability and applies the methodology developed in the Framework Plan to each water supply. This allows for the development of plan-level Preferred Approaches (solutions to identified need) for each supply. These four individual regions include:

- Regional Water Resources Plan-North West (RWRP-NW) (Group Area 1)
- Regional Water Resources Plan-South West (RWRP-SW) (Group Area 2)
- Regional Water Resources Plan-South East (RWRP-SE) (Group Area 3)
- Regional Water Resources Plan-Eastern and Midlands (RWRP-EM) (Group Area 4)

1.2 Aim of this Report

Habitats and species of European importance are provided legal protection under the EU Habitats Directive 92/43/EEC (the Habitats Directive). The Directive protects habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as the Natura 2000 network (hereafter referred to as European sites¹). European sites comprise Special Areas of Conservation (SACs²) and Special Protection Areas (SPAs).

This report provides information in support of a screening for Appropriate Assessment (AA) of the RWRP-EM Plan in line with the requirements of Article 6(3) of the EU Habitats Directive. It examines the potential for the Plan on its own or in combination with other plans and projects to have likely significant effects (LSEs) on one or more European site(s) in view of the sites' conservation objectives.

1.3 Legislative Context for AA

1.3.1 Underpinning Legislation

The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011) (hereafter referred to as the Habitats Regulations 2011). Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites.

Article 6(3) establishes the requirement for AA:

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to

¹ The term Natura 2000 network was replaced by 'European site' under the EU (Environmental Impact Assessment and Habitats) Regulations 2011 S.I. No. 473 of 2011.

² Candidate SAC (cSAC) are afforded the same protection as SACs. The process of making cSAC into SACs by means of Statutory instrument has begun and while the process is ongoing the term SAC will be used to conform with nomenclature used in the National Parks and Wildlife Services (NPWS) databased.

the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

1.3.2 Public Authorities and Appropriate Assessment

The duties of public authorities in relation to nature conservation are laid out principally in Article 27 of the Habitats Regulations 2011. Irish Water is defined as a ‘public authority’ for the purposes of the 2011 Regulations.

The first step of the AA process is to carry out a screening to establish whether, in relation to a particular plan or project, there is potential for LSEs to any European site(s). Specifically, Regulation 42(1) states:

“A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.”

Regulation 42(6) states that:

“The public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site”

In the context of Article 6(3), Irish Water must carry out screening for AA of the RWRP–EM to assess whether, on the basis of objective scientific information, the plan individually or in-combination with other plans or projects, is likely to have a significant effect on a European site. If this screening determines that it cannot be excluded, on the basis of objective scientific information, that the Plan, individually or in combination with other plans or projects, will have a significant effect on a European site, then Irish Water must determine that an Appropriate Assessment of the plan is required.

To assist Irish Water in carrying out any Appropriate Assessment that may be required following screening, Irish Water must prepare a Natura Impact Statement (NIS), which is a report comprising the scientific examination of a plan or project and the relevant European site or European sites, to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment.

In carrying out the full Appropriate Assessment, the Habitats Regulations 2011 require Irish Water to take into account:

- The NIS;
- Any other plans or projects that may, in combination with the plan or project under consideration, adversely affect the integrity of a European site;
- Any supplemental information furnished in relation to any such report or statement;
- If appropriate, any additional information furnished in relation to the NIS;
- Any information or advice obtained by Irish Water;

- If appropriate, any written submissions or observations made to Irish Water in relation to the application for consent for the Plan; and
- Any other relevant information.

Following the Appropriate Assessment process, Irish Water must then only adopt the Plan after having determined that the Plan shall not adversely affect the integrity of any European site(s).

1.4 Overlap with Strategic Environmental Assessment

A Strategic Environmental Assessment (SEA) of the RWRP–EM is being carried out concurrently with the AA process. SEA is required under the EU Council Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive) and are transposed into Irish Regulations³. The purpose of SEA is to enable plan-making authorities to incorporate environmental considerations into decision-making at an early stage and in an integrated way throughout the plan making process and to:

- Identify, evaluate and describe the potential significant environmental effects of implementing the RWRP-EM;
- Ensure that identified significant effects are communicated, mitigated and that the effectiveness of mitigation is monitored;
- Identify beneficial (and neutral) effects, and to ensure these are communicated; and
- Provide opportunity for stakeholder and public involvement.

There is a degree of overlap between the requirements of the SEA and AA and in accordance with best practice, an integrated process has been carried out between the development of the RWRP–EM, the SEA and the AA, such as sharing of baseline data where relevant, cohesive assessment of the potential ecological effects of the RWRP–EM on European sites, their qualifying features, and clarification on more technical aspects of the RWRP. These processes together will inform and shape the development of the RWRP–EM.

Figure 1.1 below outlines the SEA and AA Stages and how they align with the development of the RWRP–EM.

³ In Ireland, the SEA Directive has been transposed into national legislation through S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, as amended by S.I. No. 200 of 2011 (European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011). Also, S.I. No. 436 of 2004 (Planning and Development (Strategic Environmental Assessment) Regulations 2004, as amended by External link S.I. No. 201 of 2011 (Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011).

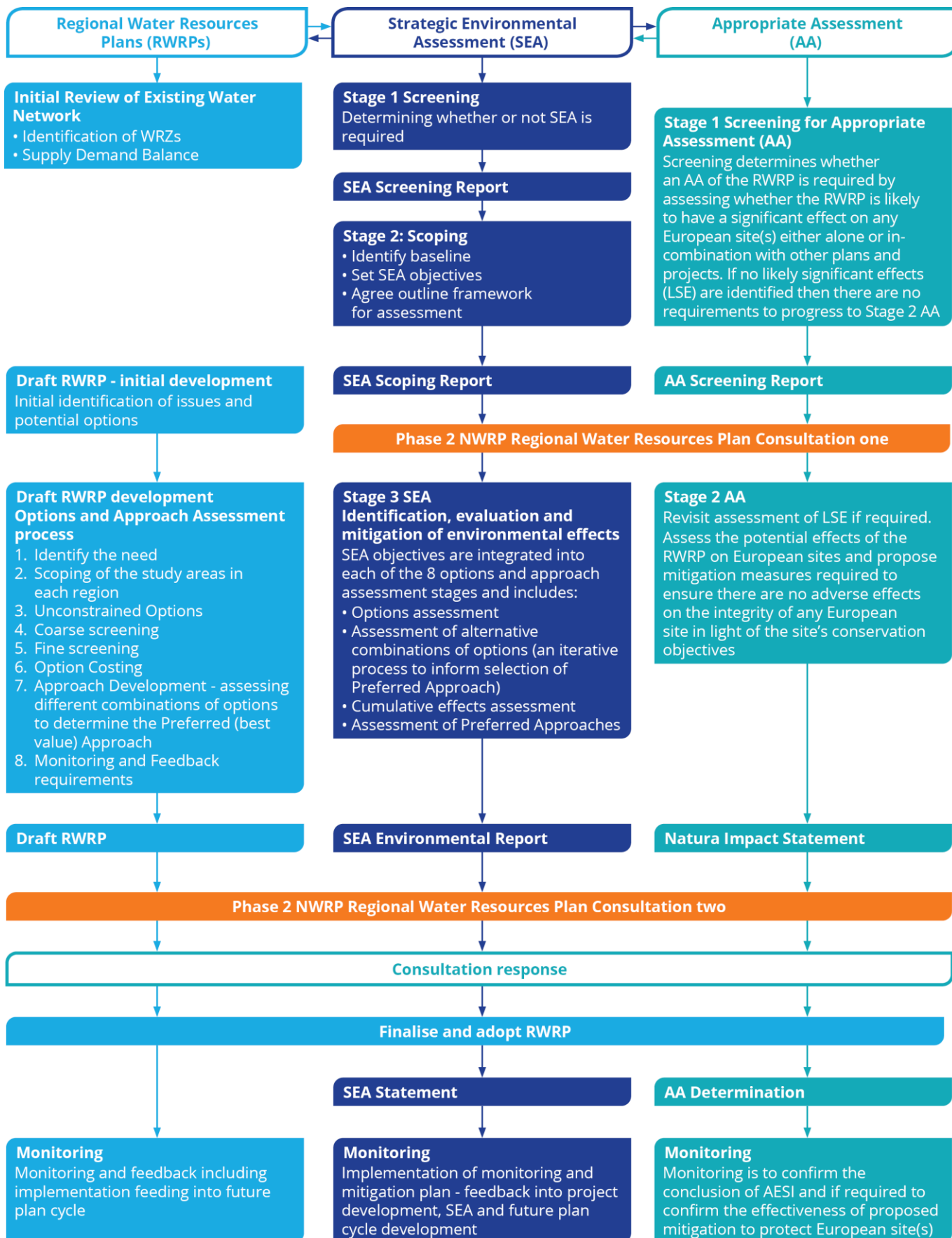


Figure 1.1 - RWRP development with SEA and AA process

1.5 Consultation

Consultation is a mandatory requirement in the SEA process and responses often make specific reference to the AA process. In line with Article 9 (5) of the SEA Regulations (S.I. No. 435 of 2004), the SEA Scoping Report will be issued to the following statutory Environmental Authorities:

- The Environmental Protection Agency (EPA);
- Department of Housing, Local Government and Heritage (DHLGH);
- The Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DTCAGSM);
- The Department of Agriculture, Food and the Marine (DAFM);
- Department of Environment, Climate and Communications (DECC); and
- Northern Ireland Environment Agency (NIEA) (transboundary related).

However, Irish Water will undertake wider consultation with government bodies, key stakeholders in the water sector and members of the general public. Comments and views on the SEA Scoping Report will be taken into account in order to inform the approach for the SEA and where relevant the AA process.



2

Development of the RWRP-EM

2.1 Background of the RWRP-EM

Irish Water's NWRP is the first resources plan for the public water supply in the Republic of Ireland. It allows Irish Water to integrate Government Policy, Legislation and external factors that have the potential to impact Irish water supplies into the planning and operation of their existing and future supply asset base.

The objective of the NWRP is to manage customer and communities needs while meeting their requirements over the short, medium and long term by ensuring safe, secure, sustainable and reliable water supplies. The NWRP will:

- Enable Irish Water to address needs across our water supplies in the most effective way over time, through the regulated investment cycles;
- Ensure that there is a transparent framework to develop the most appropriate projects/programmes to meet statutory obligations in relation to water supply; and
- Provide a framework to track outcomes, allowing interventions to be prioritised to bring the water supply up to the required standards in the shortest possible timeframe.

As a basis for broad public and stakeholder engagement, the NWRP will be delivered in two phases.

The first Phase of the NWRP is the Framework Plan which details the methodologies that have been developed in order to identify need and find solutions to address need across all of their supplies in the Republic of Ireland.

Phase 2 of the NWRP is the RWRPs which divides the public water supply into four regional groupings as shown in Figure 2.1 below. The formation of these groups is based on:

- Environmental boundaries: Taking account of water catchments as delineated by the Environmental Protection Agency under the River Basin Management Plans.
- Irish Water Operational Regions (North and West, Eastern and Midlands, and Southern Region).
- In order to allow us to optimize the staffing resources during the roll out of the Regional Water Resource Plans, the large number of WRZs in the Southern Region has meant we have split the area into two groups, South West and South East.
- Local Authority boundaries: This allows us to align the Local Authority Development Plans to our Supply Demand forecasts, and to assess the full options assessments process with our colleagues in the Local Authority Water Services Sections

The RWRPs are referred to as follows:

- Regional Water Resources Plan-North West (RWRP-NW) (Group Area 1)
- Regional Water Resources Plan-South West (RWRP-SW) (Group Area 2)
- Regional Water Resources Plan-South East (RWRP-SE) (Group Area 3)
- Regional Water Resources Plan-Eastern and Midlands (RWRP-EM) (Group Area 4)



Figure 2.1 – Regional Group Areas for Phase 2

Each of these Regional Plans summarises the needs for each WRZ in terms of quality, quantity, reliability and sustainability and applies the methodology developed in the Framework Plan to each water supply. This allows for the development of plan-level Preferred Approaches (solutions to identified need) for each supply.

2.2 Scope of the RWRP-EM

The RWRP-EM is a plan identifying how to provide safe, secure and reliable water to Irish Water’s customers in the Eastern and Midlands Region for the next 25 years, without causing adverse impacts on the environment.

2.3 Objectives of the RWRP-EM

The objective of the RWRP-EM is to set out how Irish Water intends to maintain the balance between supply and demand for drinking water over the short, medium and long term. This involves:

- Identifying all possible solutions for each WRZ by the application of the options assessment methodology;
- Screening out all options that are not feasible;
- Developing outline designs for Feasible Options;
- Through Multi Criteria and whole life cost analysis, developing Feasible Options and Preferred Approaches for each WRZ in the short, medium and long term;
- Assessing the Feasible Options to develop a Preferred Approach for each WRZ. This would be expected to result in small local options that can resolve need solely within all or part of the WRZ.
- Assessing the Feasible Options to see whether any Regional Options are available to meet the need across multiple WRZs. This stage can yield a modified Preferred Approach at the Study Area level.

- Assessing the Feasible Options at the Regional Group Area level to see if there are any options that can be applied across the entire Region and, if appropriate, adjust the Preferred Approach accordingly; and
- Assessing any inter-regional options and potential cumulative or in-combination effects and determine if any adjustment is required.

2.4 Geographical Scale of the RWRP-EM

The first stage of the RWRP-EM process is defining the WRZs within the regional group. This is the largest self-contained area within which all water resources can be shared, and all customers experience a similar level of risk of supply failure. From an initial review of the resource system it is anticipated that there will be approximately 300 WRZs identified based on the level of interconnectivity. WRZs are normally made up of a number of Water Supply Zones (WSZs). WSZ is the area supplied by an individual water supply scheme. This typically includes one or more abstractions (from a river, lake or groundwater), a treatment plant, storage in reservoirs and the distribution pipe network to deliver the water to each household or business.

WSZs in relation to key settlements in Eastern and Midlands region are illustrated in Figure 2.2 below.

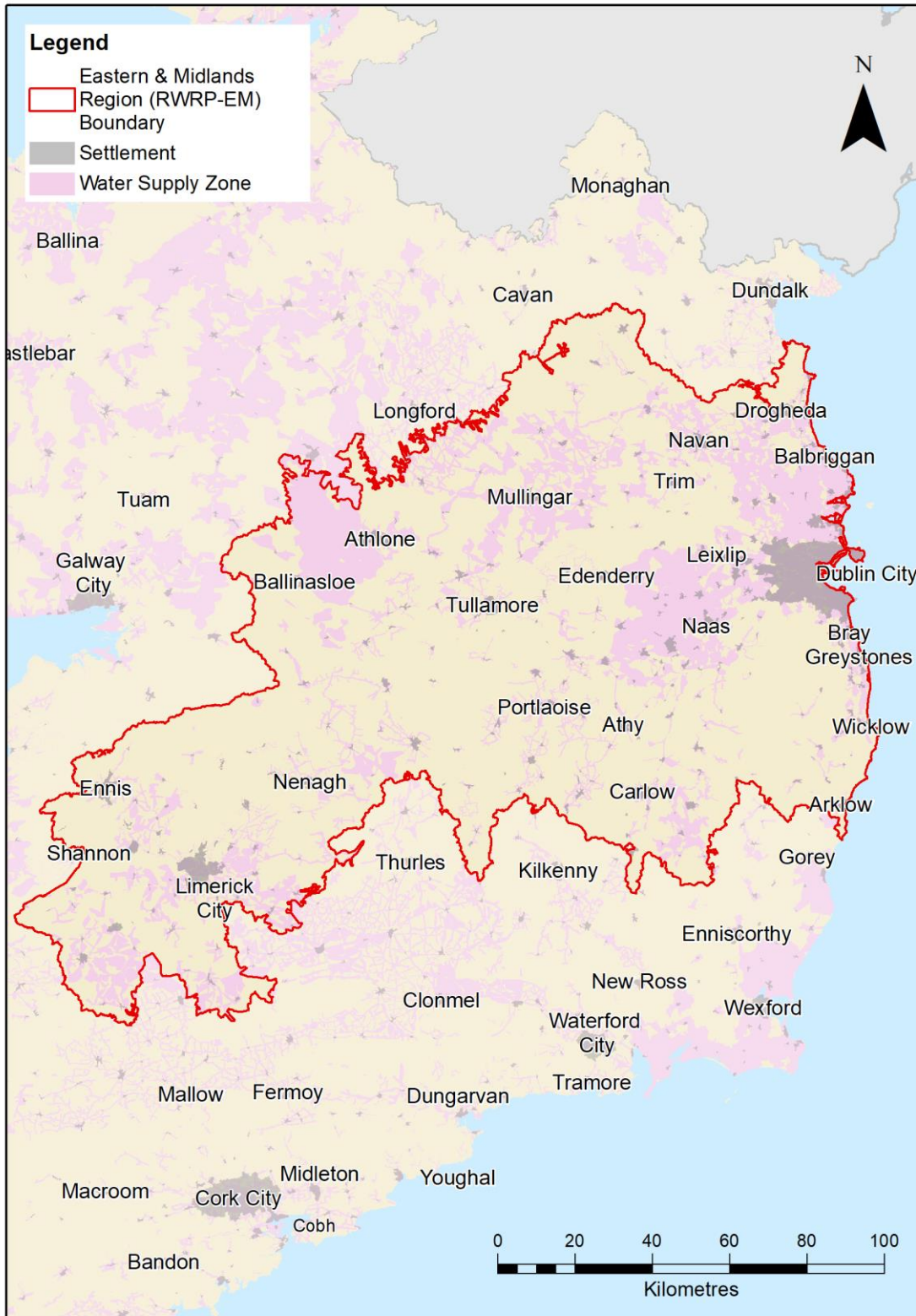


Figure 2.2 - Water Supply Zones and Key Settlements in the Eastern and Midlands region

2.5 Temporal Scale

The RWRP-EM covers the supply demand balance (SDB) for WRZs within the EM region on a 25-year basis and is reviewed at least every 5 years. The RWRP-EM will be published in summer 2021, with 2020 as the base year of the study. The RWRP will cover the 25-year period until 2045.

2.6 Transboundary Effects

The RWRP–EM solely covers Irish Water’s operational area for the Eastern and Midlands and is therefore not a transboundary plan. However, potential transboundary issues or effects will be taken into consideration as part of the AA process. For the purposes of the assessment waterbodies are considered the main potential transboundary issue.

2.6.1 Identification of Options

The aim of the RWRP–EM is to allow Irish Water to maintain a balance between supply and demand. A supply demand balance forecast will enable the identification of any current or predicted water supply deficits from each WRZ. Using this information, a list of potential option types to address that deficit has been developed, as detailed in Table 2.1 below. The RWRP-EM methodology will assess the WRZ and the sources within them to identify options that could provide a sustainable, reliable source of water into the future.

Table 2.1 - Option types

RWRP category	RWRP sub-category	Summary
Lose Less		
Leakage Reduction		<p>Reducing leakage from the network is a priority for Irish Water. This can involve a range of measures for actively detecting and repairing leaks such as the installation of meters to better identify customer leakage activity and advanced monitoring tools and techniques to better identify leaks.</p> <p>Leakage reduction will focus on targeted replacement of ageing pipes, pressure management to minimise fluctuations and excessive pressures providing more constant pressures to Irish Water customers whilst reducing bursts and the application of different leak repair approaches to minimise cost and disruption.</p>
Use Less		
Water Efficiency	Education & Awareness	Environmental awareness/education campaigns and partnerships and distribution of educational materials to raise awareness of water shortages and encourage water conservation and efficiency.
	Water Efficiency Measures	<p>Use of water efficient products and processes in new and refurbished housing developments and working with building standards to ensure that water efficiency measures are included in standards regulations as mandatory. Encouraging take up of water efficiency measures by domestic and non-domestic customers such as more efficient appliances, repair of leaking toilets, use of water audits.</p> <p>Actively pursue business customers and industry for partnerships that involve water efficiency goals.</p> <p>Investigate how to use water within Irish Water’s existing assets more</p>

RWRP category	RWRP sub-category	Summary
		efficiently through improved treatment processes and recycling of effluent water for appropriate uses.
	Recycling and Reuse	The recycling of treated wastewater or grey water provides a critical supplementary water source for non-potable activities therefore alleviating stress on primary water sources. Grey water refers to the water used in baths, sinks, washing machines, and other kitchen appliances. In periods of drought, when potable water is in short supply, grey water can be a potential alternative water source for activities such as agricultural and landscape irrigation, industrial process, and toilet flushing.
	Metering	Domestic water metering can build a better understanding of water use and network pressures to improve water efficiency and therefore water security and identify leaks. Water meters with advanced analytics to undertake flow balances across the network can allow Irish Water to gain a better understanding of the whole network from the abstraction point to the customers
Supply Smarter – resource supply options⁴		
Surface Water	Surface Water Abstraction	Increasing the abstraction at an existing river or lake source or developing a new river or lake source from which water can be sustainably abstracted. These options would be subject to an abstraction licence.
	Groundwater Abstraction	Increasing the abstraction at an existing groundwater source or developing a new groundwater source from which water can be sustainably abstracted. These options would be subject to an abstraction licence.
Groundwater	Aquifer Storage Recovery	Storage of treated or raw water in suitable aquifers. During times of plentiful water supply, excess water withdrawn from a river, lake or another groundwater source is injected and stored within an aquifer. This supplementary stored water can be extracted from the aquifer during periods of dry weather and/or increased demand when the primary supply sources are running low. This requires aquifers with suitable characteristics to be available as the risks of losses can be high.

⁴ It is important to note that these option types are not necessarily alternatives to each other; in the majority of the WRZs a combination of options will be selected as the preferred / recommended approach. For example, surface water and groundwater abstractions can be used in combination, this is called conjunctive use and involves the storing of surface water in groundwater basin in wet years and withdrawing it from the basin in dry years. Additionally, most new or increased abstractions will involve upgrades to or construction of new WTPs and new or upgraded transfers.

RWRP category	RWRP sub-category	Summary
Reservoirs	Storage Reservoirs	Provision of storage reservoirs which can be filled with untreated water abstracted during high flow conditions from surface waters to be drawn on during low flow periods or to provide additional resilience during droughts as a back-up supply source.
Catchment Management	Catchment management for ground or surface water sources	Activities such as agriculture, forestry, industry and waste management all have an impact on the retention of water in the catchment and the quality of the water within rivers and loughs. Pollutants in the water can lead to ecological deterioration, increased flood risk and can also create issues for water treatment. There may be scope for changes to land management through working in partnership with landowners, farmers and regulators to develop agreements and share information and resources to provide long term improvements with wide benefits including water suitable for supply from surface or groundwaters.
Effluent Reuse	Effluent Reuse	Recycling of wastewater effluent from treatment plants can produce a new supply source from wastewater which is otherwise discharged to rivers or the sea. This involves treating wastewater to a sufficiently high standard to meet supply standards relevant for the intended use for example for agricultural/horticulture/industry/water supply or for release to rivers to maintain flows.
Desalination	Desalination: Coastal or Brackish	This involves the process of removing salt and other minerals from seawater or brackish water ⁵ river estuaries to make it suitable for human consumption and/or industrial use. The level of treatment required is related to the salt concentration of the water.
Water Transfers	Transfers	Water transfer is the physical movement of water from one area to another usually via pipelines, although other means such as canals or aqueducts can be used. These generally refer to the transfer of treated water and can vary considerably in scale in terms of size and length from local transfers from one WRZ to another, to regional transfers and inter-utility transfers (from Northern Ireland Water).
	Tankering	Delivery of treated water to customers via road tanker to alleviate temporary short-term water shortages in certain localised situations.
Network Improvements	Network Improvements (general)	Network improvement involves works such as upgrade, replacement or operational improvements. They are undertaken to facilitate better water distribution and avoid network limitations. Therefore, strategic network reinforcement improving connections between different sources and customer supply can significantly improve security and resilience.

⁵ Brackish water is water that has more salt than freshwater, but not as much as seawater that is generally found in estuaries.

RWRP category	RWRP sub-category	Summary
	Service Reservoir Expansion	Service reservoirs store treated water. They are used to balance out the steady supply of treated water they receive from WTPs and the fluctuating variations in customer demand during a 24-hour period. They can also be used to store a backup supply in low flow events but for a limited period of time.
Water Treatment Plants	WTP Expansion/Rationalisation	Expansion of existing WTPs to facilitate the treatment of a higher volume of water. This option would be considered in-combination with an increase of a surface water or ground water abstraction or the provision of a new surface water or ground water source. Expansion of existing WTPs may be carried out as part of a rationalisation process which involves the merging of WTPs. Rationalisation is carried out to reduce water supply costs, take a malfunctioning WTP out of service or to cease abstraction from an unsustainable source.
	WTP Process Losses	For every litre of untreated water extracted from a source and fed through a water treatment plant to the supply distribution network, a small fraction of the water will be lost from the system as a result of the treatment losses. Generally, WTPs are designed to recover, treat and recycle as much of the waste stream as economically feasible. However, there can be opportunities to improve efficiency through the upgrading and installation of more complex treatment processes to reduce these process losses and therefore increase the Water Available For Use (WAFU).

2.7 Assessment Methodology Overview

As described in Chapter 8 of the Framework Plan all option types are considered and compiled into an “Unconstrained Options” list. The Unconstrained Options constitute all of the possible solutions, which either fully or partially resolve a water supply deficit, regardless of any cost, environmental or social constraints.

The Unconstrained Options list is refined using a Coarse Screening assessment which rules out any non-viable options. Each option is assessed in terms of their resilience, deliverability and flexibility, and sustainability (environmental and social impacts).

There is some overlap with the Birds Directive (2009/147/EC), the Habitats Directive (92/43/EEC) and the Water Framework Directive (WFD) (2000/60/EC) in relation to the protection of water dependent habitats and species. Under the WFD areas are designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant European sites. The linkages between the Birds and Habitats Directives (BHD) and the WFD were discussed in a document published by the European Commission (2011) which states:

“Any Natura 2000 site with water-dependent (ground- and/or surface water) Annex I habitat types or Annex II species under the Habitats Directive or with water-dependent bird species of Annex I or

migratory bird species of the Birds Directive, and, where the presence of these species or habitats has been the reason for the designation of that protected area, has to be considered for the register of protected areas under WFD Art. 6. These areas are summarised as "water-dependent Natura 2000 sites". For these Natura 2000 sites, the objectives of BHD and WFD apply".

Therefore, WFD waterbody status is taken into account by reviewing existing, new or increased abstractions and assessing whether these can meet allowable abstraction criteria. An allowable abstraction standard of 10% of Q95 is applied with the exception of waterbodies requiring "High" status where a higher threshold of 5% of Q95 is applied⁶. The application of these abstraction standards will help to ensure that any new or increased abstractions from rivers designated as SACs (which require "Good" and/or "High" status water quality) will align with the conservation objectives of these designated sites. Allowable abstraction standards for lakes is set at 50% of Q95 in line with the water quality standards applicable to lakes⁶. Further information on allowable abstractions, yield assessments and supply assessments is provided in the Framework Plan.

After the Coarse Screening Assessment, the remaining options, known as "Constrained Options" are carried forward for more detailed Multi Criteria Assessment at the Fine Screening Stage. This process requires a more detailed analysis of the options and their potential benefits and impacts across the key criteria. The output after the Fine Screening Stage is called the Feasible Options list.

The Feasible Options list is assessed against six approaches to result in the Preferred Approach options that meet the objectives of the Plan and aligns with all relevant Government policy.

⁶ UK Technical Advisory Group on the Water Framework Directive (2008). UK Environmental Standards and Conditions (Phase 1).
16 | Irish Water | Regional Water Resources Plan-Eastern and Midlands. Screening for Appropriate Assessment



3

Appropriate Assessment Methodology

3.1 Stages of Appropriate Assessment

The methodology for undertaking assessment in relation to AA has evolved from European Commission (2002) guidance and Irish guidance from the former Department of Environment, Heritage and Local Government (2010). The entire process can be broken down into four stages (Article 42/43 of the Habitats Regulations 2011), as outlined below. If at any stage in the process it is determined that there will be no implications for the European site in view of the site’s conservation objectives, the process is effectively completed. The four stages are:

Stage 1 - Screening for Appropriate Assessment (AA)/Test of Likely Significant Effects: Screening determines whether an AA is required by determining if the project or plan is likely to have a significant effect(s) on any European site(s) either alone or in-combination with other plans or projects, in light of the site’s conservation objectives (see Figure 3.1).

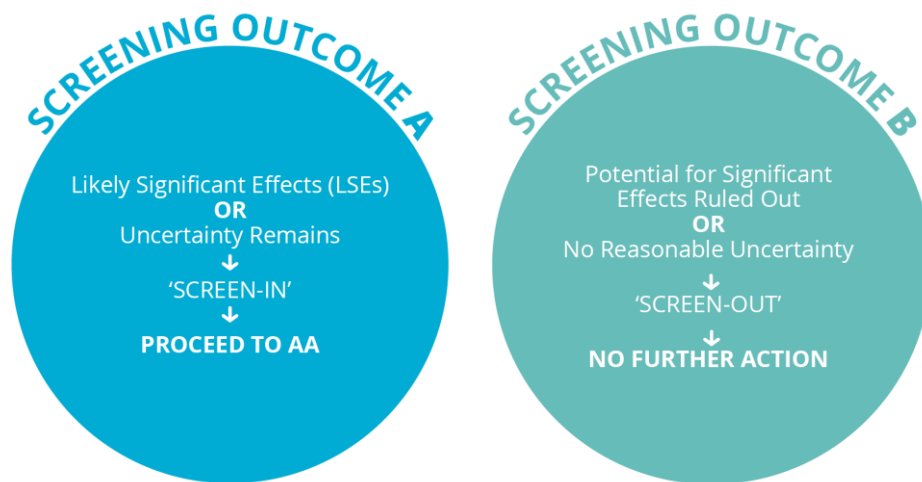


Figure 3.1 - Screening for AA

Stage 2 – Appropriate Assessment: If the screening has determined there are LSEs from the plan/project either alone or in-combination with other plans and projects on European Site(s) the implication for European sites are further assessed in the context of the implications for their conservation objectives and Adverse Effects on Site Integrity (AESI) analysed. If it is determined on further analysis and data gathering that the plan/project will not adversely affect the integrity of the relevant European site(s) then the Stage 2 Appropriate Assessment can conclude no AESI. However, if there are potential issues identified for the conservation objectives of the European site(s) then mitigation is required to protect the site’s conservation objectives. The AESI analysis is re-run and considers the structure and function of European sites, their conservation objectives and effects from the project/plan both alone and in-combination with other projects or plans. Where AESI are identified, mitigation measures are proposed as required to avoid adverse effects on the integrity and conservation objectives of the European site(s). The information and data to inform the AA process is documented within a NIS. This is provided to the competent authority to facilitate their AA determination of the plan or project.

Stage 3 – Assessment of Alternative Solutions: Following AA, including mitigation proposals, if AESI remain, or uncertainty remains and the project/plan is to be progressed, an Assessment of Alternative Solutions is required under the provisions of Article 6(4) of the Habitats Directive. This process examines the alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site. If no alternatives exist, or all alternatives would result in adverse effects on

the integrity of a European site, then either the process moves to the next stage or the project is abandoned.

Stage 4 – Imperative Reasons of Over-Riding Public Interest (IROPI): In the unlikely event where an Assessment of Alternative Solutions fails to identify any suitable alternatives, then for a project or plan to be progressed it must meet the requirements of IROPI. In this case the provisions of Article 6(3) cannot be met and therefore, the provisions of Article 6(4) are used. If in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed, thus compensatory measures are implemented to maintain the coherence of the European site network in the face of adverse effects to the integrity of the site(s).

3.2 Approach to AA of Regional Water Resources Plans

RWRPs are required to identify specific water resource options to address predicted SDB deficits in a given WRZ within a defined region. The approach to this AA screening takes consideration of their strategic nature and uses objective information to determine whether the Plan, in this case a regional Plan, have LSEs for European sites in the manner outlined in *Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland* (Court of Justice of the European Union, Case C-6/04, Opinion of Advocate General Kokott)⁷ and *Waddenzee* (Court of Justice of the European Union, C-127/02).

3.2.1 Application of the AA process at Plan level

In the context of AA screening, when applying the ‘test of significance’ the test is of the “likelihood” of effects rather than the “certainty” of effects. In accordance with the *Waddenzee* Judgement⁸, a likely effect is one that cannot be ruled out based on objective information and is underpinned by the precautionary principle and the test of beyond reasonable scientific doubt. This test therefore sets a low bar: a plan should be considered ‘likely’ to have an effect if the competent authority (in this case Irish Water) is unable (on the basis of objective information) to exclude the possibility that the plan could have significant effects on any European site, either alone or in-combination with other plans or projects. An effect is considered to be ‘significant’ if it could undermine a European site’s conservation objectives.

The methodology for undertaking screening for AA can be applied at both a project and plan level assessment. The suitability of the data and information used and any decisions flowing from its use in the RWRP-EM assessment have to meet the provisions and requirements of the Habitats Directive. The strategic assessments at the plan level will inevitably be undertaken at a higher level than would be the case for projects. However, the RWRP-EM does not provide consent for any future projects arising from it or future iterations of the plan but, demonstrates that the protection for the European site network is suitably considered and achievable in the context of the remit of the plan. Also, any future project level AA screenings and/or NIS will have regard for the plan level AA screening as the projects have been identified or specified from the RWRP-EM. To note, all of Irish Water’s projects are screened for AA. Therefore, all projects arising from the RWRP-EM will additionally be required to go through individual environmental assessments (including AA screening and if needed AA). These will be obligatory in support of planning applications (where a project requires planning permission) or in support of licensing applications (for example, for new or increased surface or groundwater abstractions).

3.2.2 Compliance of the RWRP-EM development process with the Habitats Directive

The RWRP identifies needs in terms of quantity, quality and reliability, and develops a methodology (Option Assessment Methodology) to develop interventions to address this need. The AA screening for

⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62004CC0006> Accessed August 2020.

⁸ [ECJ case C-127/02]

the RWRP-EM has assessed at a high level the Options Assessment Methodology and the option types that are likely to arise from the RWRP-EM. The RWRP-EM identifies option types that could be applied across the Eastern and Midlands region.

The AA screening for the RWRP-EM therefore assesses the potential impacts on European sites of the RWRP-EM at a regional scale within the Eastern and Midlands region.

Applying the above approach demonstrates that the development of the RWRP-EM is compliant with the requirements of the Habitats Directive.

3.3 Guidance documents in relation to Appropriate Assessment

The requirements of Article 6 of the Habitats Directive for the RWRP-EM have been applied following the guidance documents:

- AA of Plans and Projects in Ireland: Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, 2010a);
- Appropriate Assessment Screening for Development Management. OPR Practice Note PN01. (Office of the Planning Regulator, 2021).
- Assessment of Plans and Projects in Relation to Natura 2000 Sites – Methodological Guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission, 2021);
- Communication from the Commission on the Precautionary Principle (European Commission, 2000);
- Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission (European Commission, 2007);
- Marine Natura Impacts Statements in Irish Special Areas of Conservation. A Working Document (Department of Arts, Heritage and the Gaeltacht, 2012); and
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Commission, 2018).

The following circulars have also been used:

- AA under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10 (Department of Environment, Heritage and Local Government, 2010b);
- AA of Land Use Plans. Circular Letter SEA 1/08 & NPWS 1/08 (Department of Environment, Heritage and Local Government, 2008a);
- Compliance Conditions in respect of Developments requiring (1) Environmental Impact Assessment (EIA); or (2) having potential impacts on Natura 2000 sites. Circular Letter PD 2/07 and NPWS 1/07 (Department of Environment, Heritage and Local Government, 2007a);
- Guidance on Compliance with Regulation 23 of the Habitats Directive. Circular Letter NPWS 2/07 (Department of Environment, Heritage and Local Government, 2007b); and
- Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments. Circular L8/08 (Department of Environment, Heritage and Local Government, 2008b).

3.4 Guiding Principles and Case Law

A number of cases have been brought to both the national and European courts in relation to the AA process. Irish departmental guidance (Department of Environment, Heritage and Local Government, 2010a)⁹ in relation to AA was published over 10 years ago. Therefore, recent case law has, in many cases, superseded this guidance. However, recent guidance from the OPR (2021)¹⁰ in relation to AA screening has now been published and considered in this assessment. Relevant case law, ECJ rulings and EC publications have also been considered in the preparation of the AA screening for the RWRP-EM.

3.5 Identification of European Sites

Sites within the Natura 2000 Network are referred to as European sites and include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). SACs are designated for the conservation of Qualifying Interests (QI), Annex I habitats and Annex II species (other than birds). SPAs are designated for the conservation of Special Conservation Interest (SCI) Annex I birds and other regularly occurring migratory birds and their habitats.

Irish departmental guidance on the Zone of Influence (Zoi) to be considered during the AA stated the following:

“A distance of 15km is currently recommended in the case of plans, and derives from UK guidance (Scott Wilson et al., 2006). For projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects”.

However, the actual extent of the Zoi depends on the effect pathway, as well as the specific nature of different habitats/species for which a European site is designated including functional and supporting habitat (OPR, 2021). Therefore, for these reasons the Zoi must be scientifically defined and based upon further information.

As part of the desk-based assessment specific buffers will be used to identify the Zoi in relation to ground water abstraction Borehole and Zone of Contribution (ZOC) data will be obtained from the Geological Survey Ireland (GSI) database and used to determine existing ground water abstraction pressures on adjacent European sites. Where data is not available or proposed options consist of new boreholes a 5km buffer will be used to assess an abstraction as this is the greatest distance or ZOC as determined by GSI when assessing borehole abstractions. When assessing likely Zoi for all other options the “source-pathway-receptor” model will be applied. European sites with a hydrological link to any given option/study area will be considered to be within the Zoi. As such sites that are outside the boundary of the regional group may also be included in the assessment where there is an effects pathway.

The RWRP-EM covers the Eastern and Midlands region of the Republic of Ireland. Therefore, all European sites within the Eastern and Midlands region (core baseline area – see Section 3.5 of the SEA Scoping Report) and European sites with potential effects pathways located outside the region were initially considered to be potentially within the Zoi of the RWRP-EM.

⁹ https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf Accessed May 2021

¹⁰ <https://www.opr.ie/wp-content/uploads/2021/03/9729-Office-of-the-Planning-Regulator-Appropriate-Assessment-Screening-booklet-15.pdf> Accessed May 2021

3.5.1 Special Areas of Conservation

SACs cover a variety of habitat types recognised in Annex I of the Habitats Directive, with 16 habitats designated as “priority” habitats owing to their ecological vulnerability (NPWS, 2019a). Habitats for which SACs are designated include lakes, raised bogs, blanket bogs, turloughs, sand dunes, machair, heaths, rivers, woodlands, estuaries and sea inlets. In addition, the Habitats Directive recognises 26 Annex II species. Some of the species for which SACs have been designated include, but are not limited to: Atlantic salmon (*Salmo salar*), otter (*Lutra lutra*), lesser horseshoe bat (*Rhinolophus hipposideros*), freshwater pearl mussel (*Margaritifera margaritifera*) and Killarney fern (*Trichomanes speciosum*). There are 433 SACs (terrestrial) in Ireland and of these 358 are water-dependent (Department of Housing, Planning and Local Government, 2018). These SACs support various habitats and species that are dependent on surface and/or groundwater sources. There are approximately 800 water bodies within European sites, all supporting water dependent habitats and species. A number of significant pressures on these water bodies have been identified (Department of Housing, Planning and Local Government, 2018), including:

- Agriculture;
- Hydromorphological pressures;
- Forestry;
- Urban wastewater;
- Anthropogenic pressures;
- Abstractions; and
- Invasive species.

Of the pressures noted above, water abstraction is of particular relevance to the RWRP-EM. Water abstractions from both ground and surface water have been identified as being a potential threat to some Annex I habitats and Annex II species. As discussed in the Framework Plan NIS sustainable abstraction limits (for new surface water abstractions) have been set which will ensure the protection of these Annexed species and habitats. There are 143 SACs within the EM region.

3.5.2 Special Protection Areas

The majority of the wintering water birds and breeding seabirds occurring in Ireland are considered to be regularly occurring migratory birds. Over 60% of the 25 Annex I listed species that now occur in the Republic of Ireland on a regular basis belong to the breeding seabird and wintering waterbird groups. This has in part led to the situation of the majority (> 80%) of Ireland’s SPAs being designated for these two bird groups.

Some of the productive marine intertidal zones of bays and estuaries are included within SPAs and these provide vital food resources for several wintering wader species, including knot (*Calidris canutus*), dunlin (*Calidris alpina*) and bar-tailed godwit (*Limosa lapponica*). Also included in the SPA network are marine waters adjacent to breeding seabird colonies and other important areas for divers, seaducks and grebes.

Finally, a number of inland wetland sites and areas of blanket bog and upland habitats have also been designated as SPAs for wintering water birds. These sites provide important breeding and foraging areas for numerous other species including merlin (*Falco columbarius*) and golden plover (*Pluvialis apricaria*). Agricultural land is also represented within the SPA network ranging from the extensive farmland of upland areas where hedgerows, wet grassland and scrub offer feeding and/or breeding opportunities for

hen harrier (*Circus cyaneus*) to the intensively farmed coastal polderland where internationally important numbers of swans and geese occur. There are 39 SPAs within the EM region.

3.5.3 Conservation Objectives

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of annexed habitats and annexed species of community interest for which an SAC or SPA has been designated. The conservation objectives (COs) for a European site are set out to ensure that the QIs/SCIs of that site are maintained or restored to a favourable conservation condition. Maintenance of favourable conservation condition of habitats and species at a site level in turn contributes to maintaining or restoring favourable conservation status of habitats and species at a national level and ultimately at the European site network level.

Detailed site synopses for each European site are available from the NPWS website¹¹. In Ireland 'generic' COs have been prepared for all European sites, while 'site specific' COs have been prepared for a number of individual sites to take account of the specific QIs/SCIs of that site. Both the generic and the site-specific COs aim to define the requirements for favourable conservation condition for habitats and species at the site level. Generic COs, which have been developed by NPWS, encompass the spirit of site-specific COs in the context of maintaining and restoring favourable conservation condition as follows:

- For SACs: *"To maintain or restore the favourable conservation condition of the Annex I habitats and/or Annex II species for which the SAC has been selected"*.
- For SPAs: *"To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for the SPA"*.

Following on from this, favourable conservation status (or condition, at a site level) of a habitat is achieved when:

- Its natural range, and area it covers within that range, are stable or increasing;
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- The conservation status of its typical species is "favourable".

The favourable conservation status (or condition, at a site level) of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats; and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

A full list of the COs and QIs/SCIs that each European site is designated for relating to the Eastern and Midlands region, as well as the attributes and targets to maintain or restore the QIs/SCIs to a favourable conservation condition are available from the NPWS website¹².

¹¹ <https://www.npws.ie/protected-sites> (Accessed March 2020)

¹² <https://www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives> (Accessed March 2021)



4

Screening

4.1 Screening

This screening for AA was informed by a desk study of all relevant environmental information and involved the following steps (broadly based on (European Commission, 2002)):

- Determined if the proposed Plan is directly connected with or necessary to the management of the site;
- Description of the proposed Plan;
- Identification of relevant European site(s);
- Assessment of likely significant effects (LSEs) on European sites; and
- Screening conclusion.

4.2 Is the RWRP-EM exempt from assessment?

The draft RWRP-EM is not directly connected with or necessary to the management of a European site and therefore is not exempt from assessment.

4.3 Description of the RWRP-EM

An overview of the RWRP-EM, including background and context are provided in Chapters 1 and 2 of this report.

4.4 Identification of European Sites within the EM region

As discussed in Chapter 3 all European sites within the Eastern and Midlands region were initially considered to be potentially within the ZoI of the RWRP-EM, therefore potential LSEs on the conservation objectives for these sites will be considered. There is a total of 143 SACs and 39 SPAs within the EM region. There are a further two marine SACs and five marine SPAs that are not within the EM region boundary but are hydrologically linked to it. These sites are Wicklow Reef SAC, Lambay Island SAC/SPA, Ireland's Eye SPA, Rockabill SPA, Skerries Islands SPA and Dalkey Island's SPA. Table 4.1 below provides a breakdown of European sites within each Study Area within the EM region. All European sites within and in proximity to the EM region are shown in Figure 4.1 below.

Table 4.1 - Number of European sites within each Study Area¹³ within the EM region

Study Area	No. of SACs	No. of SPAs
1 (Mid Wicklow)	3	1
2 (West Wicklow)	3	2
3 (South Louth East Meath)	8	5
4 (Westmeath)	17	9
5 (Offaly Roscommon)	31	11
6 (Laois)	15	2
7 (Tipperary North)	18	5

¹³ Some SACs or SPAs fall within more than one study area

Study Area	No. of SACs	No. of SPAs
8 (Limerick Clare)	42	6
9 (Greater Dublin Area)	27	10

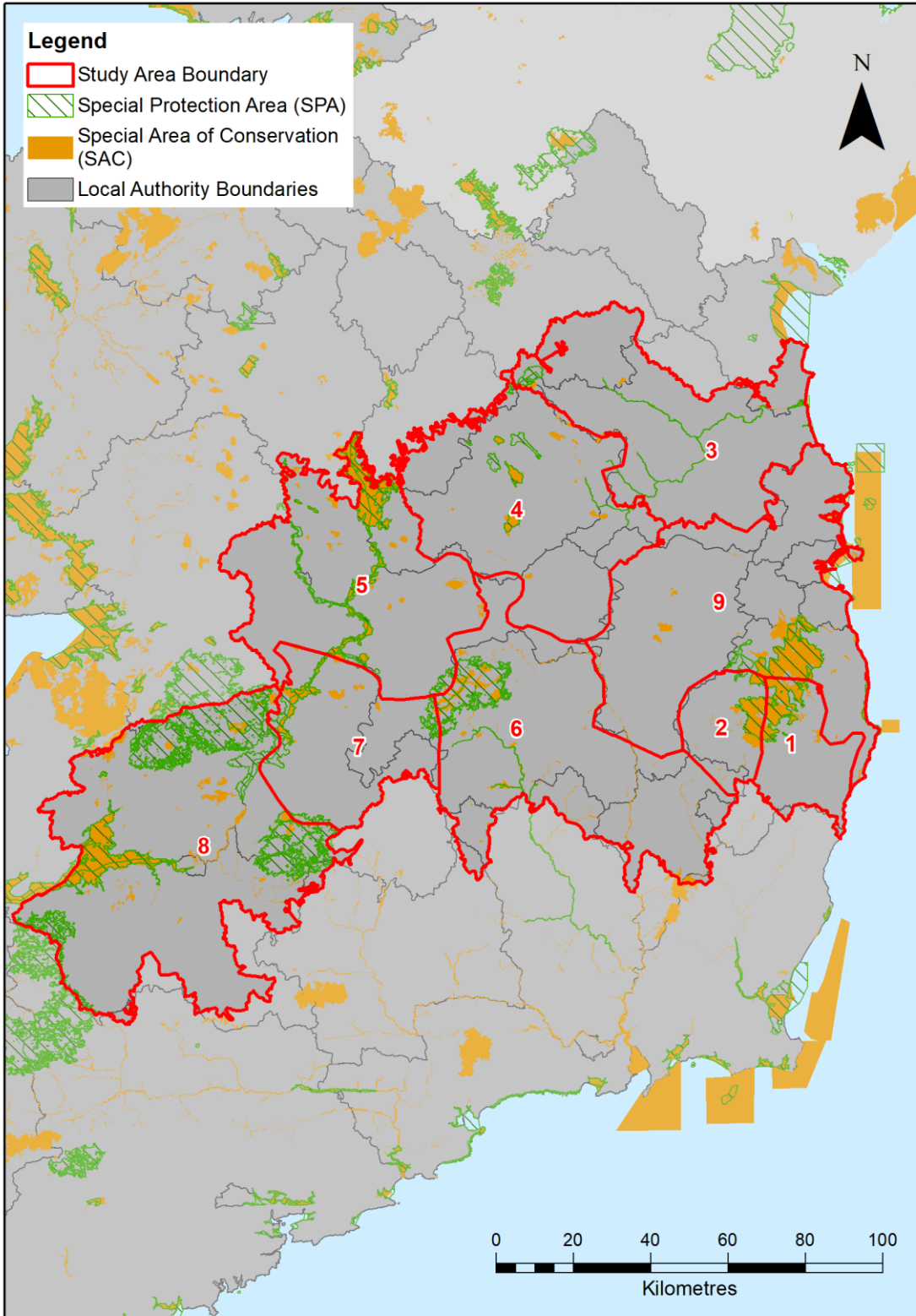


Figure 4.1 - European sites within the Eastern and Midlands region

4.5 Assessment of Likely Significant Effects

The RWRP-EM methodology will identify suitable water resources management options for the various WRZs throughout the EM region. The water resources management option types that will arise from the RWRP-EM will potentially result in LSEs on European sites in the absence of mitigation. Therefore, a high-level assessment of the potential LSEs of these management option types is the focus of this assessment.

Table 4.2 outlines the potential LSEs associated with the various management options. It should be noted that a number of the options may have no effect on European sites, while others could have beneficial impacts on European sites, for example options that seek to improve overall water quality (for example, surface and/or groundwater catchment management). However, the implementation of the RWRP-EM may give rise to measures that could result in a variety of potential effects, including but not limited to:

- Physical loss of habitats/supporting habitat;
- Mortality;
- Habitat degradation - changes in water quality (pollution);
- Habitat degradation - hydrological/hydrogeological changes;
- Changes in hydrology - water table/availability;
- The spread of invasive non-native species; and
- Disturbance (including biological disturbance).

Table 4.2 - Potential LSEs from the management option types arising from the RWRP-EM

Option Type	RWRP sub-category	Summary	Potential for LSEs
Lose Less			
Leakage Reduction	N/A	Assessment and repair of pipelines to reduce leakage from existing network.	Yes. Although for the most part this option type should have the potential for positive impacts. There is still potential for direct and indirect effects on SACs and SPAs associated with the construction or upgrade of infrastructure to address leakage reduction.
Use Less			
Water Efficiency	Education & Awareness	Environmental education, campaigns, programmes and partnerships to raise awareness of water management and to encourage savings.	Yes. Although for the most part this option type should have the potential for positive impacts. There is still potential for direct and indirect effects on SACs and SPAs associated with the construction or upgrade of infrastructure to ensure water efficiencies. There is the potential for operational effects from grey water use. Reduction of potable water would have positive impacts however there is the potential for health risks from untreated grey water from the presence of bacteria for example. Some level of grey water treatment would be required therefore increasing costs of this option.
	Water Efficiency Measures	Methods of reducing water wastage.	
	Recycling and Reuse	Recycling and reuse of "grey water".	
	Metering	Domestic water meters.	
Supply Smarter – Resource Supply Options			

Option Type	RWRP sub-category	Summary	Potential for LSEs
Surface Water	Surface Water Abstraction	Increasing the abstraction at an existing river or lake source or developing a new river or lake source from which water can be sustainably abstracted. These options would be subject to an abstraction licence.	<p>Yes. Where new or increased abstractions are required there is potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation. Aquatic and water dependent QI and their supporting habitats would be most at risk.</p> <p>Note: Irish Water undertake a cumulative assessment with Irish Water abstractions and proposed new abstractions as part of the assessment.</p>
Groundwater	Groundwater Abstraction	Increasing existing groundwater abstraction or developing a new source from which water can be sustainably abstracted. These options would be subject to an abstraction licence.	<p>Yes. Where new or increased abstractions are required there is potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation. Aquatic and ground water dependent QI species (and their supporting habitats) and groundwater dependent terrestrial habitats (GWDTHs) would be most at risk.</p> <p>Note: Irish Water undertake a cumulative assessment with Irish Water abstractions and proposed new abstractions as part of the assessment.</p>
	Aquifer Storage Recovery	Storing treated or raw water in suitable aquifers for extraction during increased demand periods.	
Reservoirs	Storage Reservoirs	Provision of storage reservoirs which can be filled with untreated water abstracted during high flow conditions from surface waters to be drawn on during low flow	<p>Yes. This option type could result, for example, in changes in hydrology potentially altering the aquatic environment. Affecting aquatic and water dependent</p>

Option Type	RWRP sub-category	Summary	Potential for LSEs
		periods or to provide additional resilience during droughts as a back-up supply source	QI and their supporting habitats would be most at risk. Potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation.
Catchment Management	Catchment management for ground or surface water sources	Changes to land management such as forestry or agricultural practices to reduce pollution causing water treatment issues or to encourage water retention in the catchment.	Yes. Potential for positive impacts on aquatic receptors if water quality in the catchment is improved.
Effluent Reuse	Effluent Reuse	Recycling of wastewater effluent from treatment plants can produce a new supply source from wastewater which is otherwise discharged to rivers or the sea. This involves treating wastewater to a sufficiently high standard to meet supply standards relevant for the intended use for example for agricultural/horticulture/industry/water supply or for release to rivers to maintain flows.	Yes. This option type could result, for example, in changes in hydrology potentially altering the aquatic environment. Affecting aquatic and water dependent QI and their supporting habitats would be most at risk. Potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation.
Desalination	Desalination: Coastal or Brackish	This involves the process of removing salt and other minerals from seawater or brackish water ¹⁴ river estuaries to make it suitable for human consumption and/or industrial use.	Yes. Potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation. In particular, there is a risk from toxic effects associated with elevated salinity and desalination waste brine. Aquatic and water dependent QI and their supporting habitats would be most at risk.

¹⁴ Brackish water is water that has more salt than freshwater, but not as much as seawater generally located in estuaries.

Option Type	RWRP sub-category	Summary	Potential for LSEs
Water Transfers	Transfers	Water transfer is the physical movement of water from one area to another usually via pipelines, although other means such as use of canals or aqueducts can be used. These generally refer to transfer of treated water and can vary considerably in scale in terms of size and length from local transfers from WRZ to another to regional transfers and inter-company transfers (from Northern Ireland).	<p>Yes. Potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation.</p> <p>Note: the transfer of invasive species from one catchment to another is not considered a risk as Irish Water do not allow cross catchment raw water transfers.</p>
	Tankering	Delivery of treated water to customers via road tanker to alleviate temporary short-term water shortages for certain localised situations.	
Network Improvements	Network Improvements (general)	Network improvement involves infrastructural improvements such as upgrade or replacement or operational improvements.	<p>Yes. Although for the most part this option type should have the potential for positive impacts. There is still potential for direct and indirect effects on SACs and SPAs associated with the construction or upgrade of infrastructure for network improvements, reservoir expansion and to address leakage reduction.</p>
	Service Reservoir Expansion	Service reservoirs store treated water.	
Water Treatment Plants	WTP Expansion / Rationalisation	Expansion of existing WTPs to facilitate the treatment of a higher volume of water.	<p>Yes. Where new or increased abstractions are required there is potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation. Aquatic and water dependent QI and their supporting habitats would be most at risk.</p>
	WTP Process Losses	Improving the water treatment works efficiency to reduce water losses.	

4.6 In-combination Effects

Under Article 6(3) of the Habitats Directive an assessment of in-combination effects of the RWRP-EM with other plans and projects is considered. Consideration has been given, at this stage of the RWRP-EM to other relevant plans on a similarly strategic level that have clear potential to have an in-combination effect upon European Sites. Including the following:

- Water Services Strategic Plan (Irish Water, 2015).
- National Wastewater Sludge Management Plan (Irish Water, 2016).
- Lead in Drinking Water Mitigation Plan (Irish Water, 2015).
- National Planning Framework. Ireland 2040 Our Plan (DHPLG, 2017).
- National Marine Planning Framework (NMPF) (DHPLG, 2021).
- Regional Spatial and Economic Strategies.
- River Basin Management Plan (RBMP) (2018 -2021).
- Forestry Programme 2014-2020: Ireland (DAFM, 2014).
- Water Resource and Supply Resilience Plan – Habitats Regulation Assessment (NI Water, 2019).

Given the level of detail that is available for the RWRP-EM and the potential for likely significant effects, in-combination effects as a result of the implementation of the RWRP-EM cannot currently be ruled out.

4.7 Screening Conclusion

Stage 1 of the AA process (screening for AA) described herein relates to the RWRP-EM. The RWRP-EM is a regional scale plan covering the Eastern and Midlands region in the country.

Given the strategic nature of the RWRP-EM, the current stage of preparation and in light of a number of uncertainties relating to the implementation of the RWRP-EM going forward, it is considered that the potential for LSEs on one or more European sites, in view of the sites' conservation objectives, cannot be excluded. In the absence of more detailed information on the RWRP-EM and water resources management options listed therein at this stage, the precautionary principle must be applied.

Therefore, in accordance with Article 6(3) of the Habitats Directive, Stage 2 AA of the RWRP-EM is required. This will be presented in a NIS to fully inform the AA determination to be undertaken by Irish Water.

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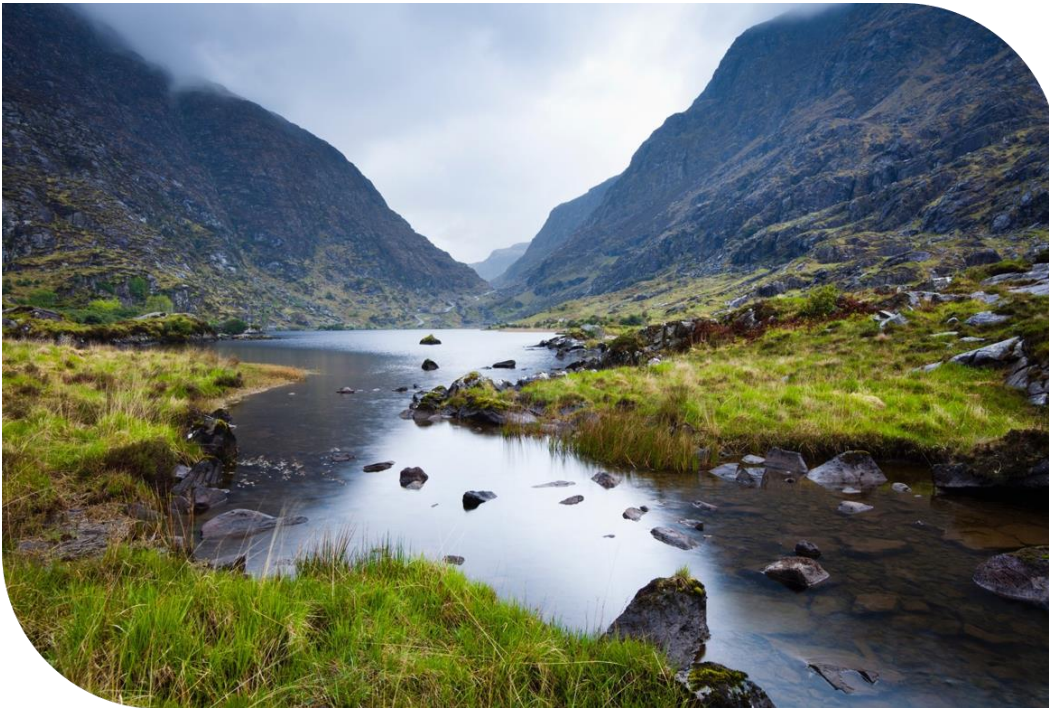
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Regional Water Resources Plan—Eastern and Midlands

Natura Impact Statement



Tionscadal Éireann
Project Ireland
2040

Data disclaimer: This document uses best available data at time of writing. Some sources may have been updated in the interim period. As data relating to population forecasts and trends are based on information gathered before the Covid 19 Pandemic, monitoring and feedback will be used to capture any updates. The National Water Resources Plan will also align to relevant updates in applicable policy documentation.

Baseline data included in the RWRP-EM has been incorporated from numerous sources including but not limited to; National Planning Framework, Central Statistics Office, Regional Spatial and Economic Strategies, Local Authority data sets, Regional Assembly data sets and Irish Water data sets. Data sources will be detailed in the relevant sections of the RWRP-EM. 2019 was selected as the base year to align with the planning period (2019-2025) of the NWRP. GIS data copyright © Ordnance Survey Ireland. Licence number EN 0094521.

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B

Appendix B

List of European Designated Sites

Appendix B. List of Special Areas of Conservation and Special Protection Areas within the Eastern and Midlands region

Special Areas of Conservation (SACs)	
Site code	Site name
000566	All Saints Bog and Esker SAC
002341	Ardagullion Bog SAC
002207	Arragh More (Derrybreen) Bog SAC
002356	Ardgraique Bog SAC
002279	Askeaton Fen Complex SAC
000199	Baldoyle Bay SAC
000588	Ballinturly Turlough SAC
000014	Ballyallia Lake SAC
000016	Ballycullinan Lake SAC
002246	Ballycullinan, Old Domestic Building SAC
000641	Ballyduff/Clonfinane Bog SAC
002036	Ballyhoura Mountains SAC
000713	Ballyman Glen SAC
002313	Ballymore Fen SAC
000391	Ballynafagh Bog SAC
001387	Ballynafagh Lake SAC
002339	Ballynamona Bog and Corkip Lough SAC
000019	Ballyogan Lough SAC
002256	Ballyprior Grassland SAC
000432	Barrigone SAC
000231	Barroughter Bog SAC
000770	Blackstairs Mountains SAC
002124	Bolingbrook Hill SAC
001957	Boyne Coast and Estuary SAC
000714	Bray Head SAC
000729	Buckroneys-Brittis Dunes and Fen SAC
002336	Carn Park Bog SAC
000716	Carriggower Bog SAC
001625	Castlesampson Esker SAC
000571	Charleville Wood SAC
000572	Clara Bog SAC
000930	Clare Glen SAC
001459	Clogher Head SAC
000859	Clonaslee Eskers and Derry Bog SAC
000248	Cloonmoylan Bog SAC
002332	Coolrain Bog SAC

Special Areas of Conservation (SACs)	
Site code	Site name
002317	Cregg House Stables, Crusheen SAC
002337	Crosswood Bog SAC
000831	Cullahill Mountain SAC
000174	Curraghchase Woods SAC
000030	Danes Hole, Poulnalecka SAC
000717	Deputy's Pass Nature Reserve SAC
002201	Derragh Bog SAC
000261	Derrycrag Wood Nature Reserve SAC
000032	Dromore Woods And Loughs SAC
000455	Dundalk Bay SAC
000575	Ferbane Bog SAC
000576	Fin Lough (Offaly) SAC
000448	Fortwilliam Turlough SAC
001637	Four Roads Turlough SAC
001858	Galmoy Fen SAC
000679	Garriskil Bog SAC
002203	Girley (Drewstown) Bog SAC
001430	Glen Bog SAC
000719	Glen Of The Downs SAC
001209	Glenasmole Valley SAC
001912	Glendree Bog SAC
002213	Glenloughaun Esker SAC
001013	Glenomra Wood SAC
001432	Glenstal Wood SAC
001757	Holdenstown Bog SAC
000202	Howth Head SAC
002236	Island Fen SAC
001197	Keeper Hill SAC
000647	Kilcarren-Firville Bog SAC
000934	Kilduff, Devilsbit Mountain SAC
002319	Kilkishen House SAC
002214	Killeglan Grassland SAC
000006	Killyconny Bog (Cloghbally) SAC
001742	Kilpatrick Sandhills SAC
002333	Knockacoller Bog SAC
002318	Knockanira House SAC

Special Areas of Conservation (SACs)	
Site code	Site name
000725	Knocksink Wood SAC
000204	Lambay Island SAC
000869	Lisbigney Bog SAC
002147	Lisduff Fen SAC
000609	Lisduff Turlough SAC
001683	Liskeenan Fen SAC
002120	Lough Bane And Lough Glass SAC
000610	Lough Croan Turlough SAC
002241	Lough Derg, North-east Shore SAC
000685	Lough Ennell SAC
000611	Lough Funshinagh SAC
000051	Lough Gash Turlough SAC
002121	Lough Lene SAC
000688	Lough Owel SAC
000440	Lough Ree SAC
000308	Loughatorick South Bog SAC
002165	Lower River Shannon SAC
001766	Magherabeg Dunes SAC
000205	Malahide Estuary SAC
002340	Moneybeg And Clareisland Bogs SAC
000580	Mongan Bog SAC
002331	Mouds Bog SAC
002342	Mount Hevey Bog SAC
002202	Mount Jessop Bog SAC
002141	Mountmellick SAC
000581	Moyclare Bog SAC
000057	Moyree River System SAC
002157	Newgrove House SAC
002091	Newhall and Edenvale Complex SAC
000206	North Dublin Bay SAC
002010	Old Domestic Building (Keavagh) SAC
002314	Old Domestic Buildings, Rylane SAC
002245	Old Farm Buildings, Ballymacrogan SAC
001776	Pilgrim's Road Esker SAC
002126	Pollagoona Bog SAC
000396	Pollardstown Fen SAC

Special Areas of Conservation (SACs)	
Site code	Site name
000319	Pollnacknockaun Wood Nature Reserve SAC
000037	Pouladatig Cave SAC
000064	Poulnagordon Cave (Quin) SAC
000582	Raheenmore Bog SAC
002316	Ratty River Cave SAC
000397	Red Bog, Kildare SAC
002353	Redwood Bog SAC
000919	Ridge Road, SW of Rapemills SAC
002162	River Barrow and River Nore SAC
002299	River Boyne and River Blackwater SAC
000216	River Shannon Callows SAC
003000	Rockabill to Dalkey Island SAC
000208	Rogerstown Estuary SAC
001313	Rosturra Wood SAC
001398	Rye Water Valley/Carton SAC
002206	Scohaboy (Sopwell) Bog SAC
000692	Scragh Bog SAC
000585	Sharavogue Bog SAC
000939	Silvermine Mountains SAC
002258	Silvermines Mountains West SAC
000781	Slaney River Valley SAC
002312	Slieve Bernagh Bog SAC
000412	Slieve Bloom Mountains SAC
000210	South Dublin Bay SAC
000849	Spahill And Clomantagh Hill SAC
001831	Split Hills and Long Hill Esker SAC
000925	The Long Derries, Edenderry SAC
000407	The Loughans SAC
002249	The Murrough Wetlands SAC
002247	Toonagh Estate SAC
000439	Tory Hill SAC
000733	Vale of Clara (Rathdrum Wood) SAC
001810	White Lough, Ben Loughs And Lough Doo SAC
002122	Wicklow Mountains SAC
002274	Wicklow Reef SAC
002205	Wooddown Bog SAC

Special Protection Areas (SPAs)	
Site code	Site name
004103	All Saints Bog SPA
004016	Baldoyle Bay SPA
004041	Ballyallia Lough SPA
004080	Boyne Estuary SPA
004172	Dalkey Islands SPA
004137	Dovegrove Callows SPA
004026	Dundalk Bay SPA
004140	Four Roads Turlough SPA
004102	Garriskil Bog SPA
004045	Glen Lough SPA
004113	Howth Head Coast SPA
004139	Lough Croan Turlough SPA
004058	Lough Derg (Shannon) SPA
004043	Lough Derravaragh SPA
004044	Lough Ennell SPA
004046	Lough Iron SPA
004061	Lough Kinale and Derragh Lough SPA
004047	Lough Owel SPA
004064	Lough Ree SPA
004065	Lough Sheelin SPA
004025	Malahide Estuary SPA
004096	Middle Shannon Callows SPA
004017	Mongan Bog SPA
004006	North Bull Island SPA
004063	Poulaphouca Reservoir SPA
004232	River Boyne and River Blackwater SPA
004086	River Little Brosna Callows SPA
004158	River Nanny Estuary and Shore SPA
004233	River Nore SPA
004077	River Shannon and River Fergus Estuaries SPA
004097	River Suck Callows SPA
004015	Rogerstown Estuary SPA
004168	Slieve Aughty Mountains SPA

Special Protection Areas (SPAs)

Site code	Site name
004160	Slieve Bloom Mountains SPA
004165	Slievefelim to Silvermines Mountains SPA
004024	South Dublin Bay and River Tolka Estuary SPA
004161	Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA
004186	The Murrough SPA
004127	Wicklow Head SPA
004040	Wicklow Mountains SPA