

Appendix A. Screening for Appropriate Assessment



Draft National Water Resources Plan

Irish Water

Screening for Appropriate Assessment

DRAFT | Rev 01

6 October 2017



© Copyright 2017 Jacobs Engineering Ireland Limited. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This report has been prepared on behalf of, and for the exclusive use of JacobsTobin Client, and is subject to, and issued in accordance with, the provisions of the contract between JacobsTobin and the Client. JacobsTobin accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

Contents

1.	Introduction.....	1
1.1	Introduction.....	1
1.2	Aim of this Report	1
1.3	Legislative Context for AA	1
1.4	Overlap with SEA.....	2
1.5	Consultation.....	4
2.	Development of the NWRP	5
2.1	Background to the NWRP	5
2.2	Need for the NWRP	6
2.3	Scope of the NWRP	6
2.4	Related Irish Water Plans and Strategies	6
2.5	Objectives of the NWRP.....	7
3.	AA Methodology	10
3.1	Guidance Documents in relation to AA	10
3.2	Data Sources Informing the AA Screening.....	10
3.3	Guiding Principal and Case Law.....	11
3.4	Stages of AA.....	11
3.5	Identification of European Sites	12
4.	Screening	13
4.1	Is the NWRP exempt from assessment?	13
4.2	Description of the NWRP	13
4.3	Identification of Relevant European Sites	13
4.4	Water Framework Directive	16
4.5	Assessment of Likely Effects.....	16
5.	Screening Conclusion	19
6.	References	20

1. Introduction

1.1 Introduction

Irish Water Ltd. (Irish Water) is a water utility company in Ireland established by the Irish Government under the Water Services Act (2013) and set up as a subsidiary of an existing semi-state corporation, Bord Gáis (Ervia) with the intention that the company would be funded through direct billing. Irish Water is responsible for the provision of “safe, affordable and environmentally compliant water services to all customers”¹. Irish Water serves 80% of the population, and operates and maintains approximately 900 water treatment plans, which deliver water through an estimated 60,000km.

Irish Water is developing the first National Water Resources Plan (NWRP) that will outline how we move towards a sustainable, secure and reliable drinking water supply for everyone over the next 25 years whilst safeguarding our environment. This first publication of the NWRP will involve the production of a methodology to be applied in subsequent iterations of the NWRP. It will advise on the data to be collected and steps to be taken so that the methodology can be more fully undertaken in the second NWRP. Therefore, the next review of the NWRP will take place in approximately two rather than five years.

1.2 Aim of this Report

The EU Habitats Directive (Directive 92/43/EEC) provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as the Natura 2000 network (hereafter referred to as European sites²). European sites comprise Special Areas of Conservation (SACs³) and Special Protection Areas (SPAs).

This report provides information in support of a screening for Appropriate Assessment (AA) of the Draft NWRP in line with the requirements of Article 6(3) of the EU Habitats Directive. AA is a process for undertaking a focused impact assessment of a plan or project, examining its implications, on its own or in combination with other plans and projects, on one or more European site (s) in view of the sites’ conservation objectives, as referred to in Article 6(3) of the EU Habitats Directive.

1.3 Legislative Context for AA

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the “Habitats Directive” provides legal protection for habitats and species of European importance. 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 (hereafter referred to as the Habitat 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. The first step of the AA process is to carry out a Screening to establish whether, in relation to a particular plan or project, an AA is required.

Article 6(3) established 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 the provisions of paragraph 4, the

¹ Ervia, 2015, Irish Water Business Plan; Transforming Water Services in Ireland to 2021, available at: <https://www.water.ie/about-us/>.

² “European site” replaced the term “Natura 2000 site” under the EU (Environmental Impact Assessment and Habitats) Regulations 2011 S.I. No. 473 of 2011.

³ cSACs are afforded the same protection as SACs. The process of making ‘candidate’ (cSAC) SACs by means of Statutory Instrument has begun. While this process is ongoing the term SAC will be used, in conformance with nomenclature used in NPWS databases.

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

Article 6(4) states:

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

1.3.1 Public Authorities and AA

The duties of public authorities (in this case Irish Water) in relation to nature conservation are laid out principally in Article 27 of the Habitat Regulations, 2011. Article 42 of the same Regulation addresses screening for AA and AA of implications of a plan or project for European sites:

“A screening for Appropriate Assessment of a plan or project...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”.

Significantly, the legislation provides that the public authority (i.e. Irish Water) shall carry out the screening for AA before a decision to undertake or adopt a plan or project is taken: Article 42(6) states in this regard 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”.*

Accordingly, as a matter of law, in the context of Article 42(7) of these Regulations, the issue for consideration by Irish Water is whether or not, in carrying out a Stage 1 Screening for AA, and on the basis of objective scientific information, it can be excluded that the plan, individually or in combination with other plans or projects, will have a significant effect on a European site. If screening determines likelihood for significant effects on a European site, or uncertainty remains, then a full AA must be carried out for the plan, including the compilation of a Natura Impact Statement (NIS) to help Irish Water make an informed decision on AA as the competent authority.

1.4 Overlap with SEA

A Strategic Environmental Assessment (SEA) of the Draft NWRP 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 transposing Irish Regulations. 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 likely significant effects (LSEs) on the environment of implementing the NWRP;
- ensure that identified adverse 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 Draft NWRP, the SEA and the AA, such as sharing of baseline data, cohesive assessment of the potential ecological effects of the Draft NWRP on European sites and clarification on more technical aspects of the NWRP. These processes together will inform and shape the development of the Draft NWRP.

Screening for Appropriate Assessment

It is also noted that there are other aspects relevant to the Habitats Directive that are not strictly related to AA, such as Article 10 of the Directive. Such aspects have been discussed in the biodiversity, flora and fauna section of the SEA and have been addressed in that context as part of the wider environmental assessments informing the Draft NWRP. Figure 1-1 below outlines how the SEA and AA Stages and how they align with the development of the NWRP. The current stage in the AA process is highlighted in orange.

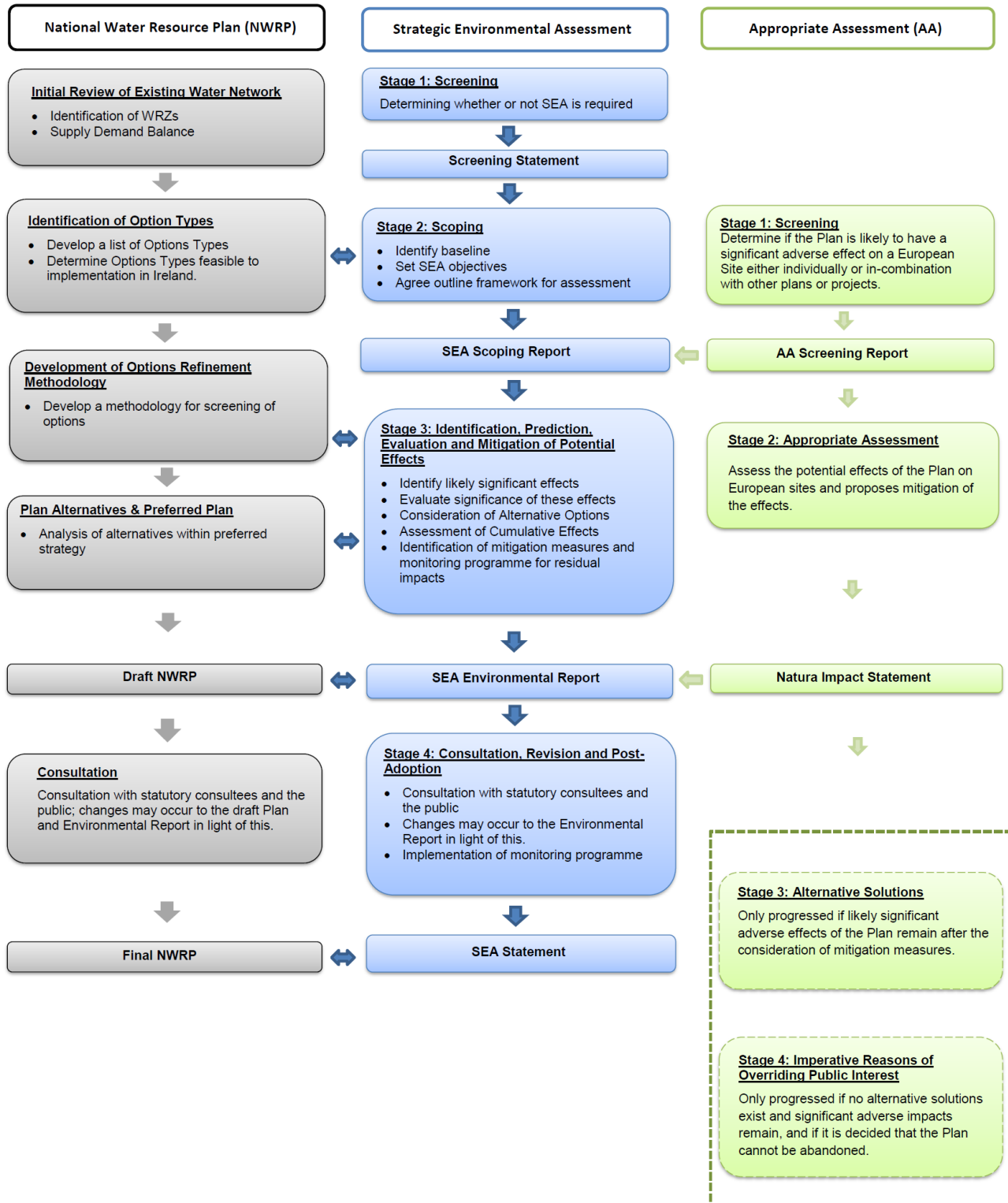


Figure 1-1 How the stages of SEA and AA align with the development of the NWRP

1.5 Consultation

Consultation is a mandatory requirement in the SEA process and responses often make specific reference to the AA process. As part of the SEA scoping process and in accordance with Article 11 of S.I. No. 435 of 2004, environmental authorities as well as any relevant transboundary authorities will be notified that a submission or observation in relation to the scope and level of detail of the information to be included in the SEA report may be made to Irish Water.

This SEA Scoping Report will be issued to the following statutory Environmental Authorities⁴:

- The Environmental Protection Agency (EPA);
- Department of Housing, Planning and Local Government (formerly the Department of Environment, Community and Local Government);
- The Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (formerly the Department of Arts, Heritage and Gaeltacht Affairs);
- The Department of Agriculture, Food and the Marine;
- Department of Communications, Climate Action and Environment (formerly the Department of Communications, Energy and Natural Resources); 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.

⁴ Recent governmental changes may require amendments to the exact name convention of these environmental authorities. The EPA have recommended that until a Departmental Circular is issued with the new names of the Departments, that the existing circular is to be used.

2. Development of the NWRP

2.1 Background to the NWRP

Irish Water is now developing the first National Water Resources Plan (NWRP) that will outline how we move towards a sustainable, secure and reliable drinking water supply for everyone over the next 25 years whilst safeguarding our environment.

The preparation of the NWRP provides, for the first time, an opportunity to strategically plan the way that water services are delivered in Ireland at a national level.

The Water Services Strategic Plan (WSSP), Irish Water’s strategic plan for the next 25 years, identifies a number of Implementation Plans (Tier 2) which are being prepared by Irish Water following the approval of the WSSP by the Minister of the Environment, Community and Local Government in October 2015. Figure 2-1 shows the hierarchy of plans and the environmental and planning inputs to their development.

The preparation and implementation of the NWRP is an action identified in the WSSP. A key objective of the WSSP is to ensure a safe and reliable water supply. This objective has three strategic aims to:

- manage the sustainability and quality of drinking water from source to tap to protect human health,
- manage the availability, sustainability and reliability of water supply now and into the future and
- manage water supplies in an efficient and economic manner.

Irish Water recognises the need for a good quality, resilient water supply, for all its customers. The purpose of a NWRP is to provide a plan that will secure the availability of drinking water supplies across the country to meet current and growing future demands.

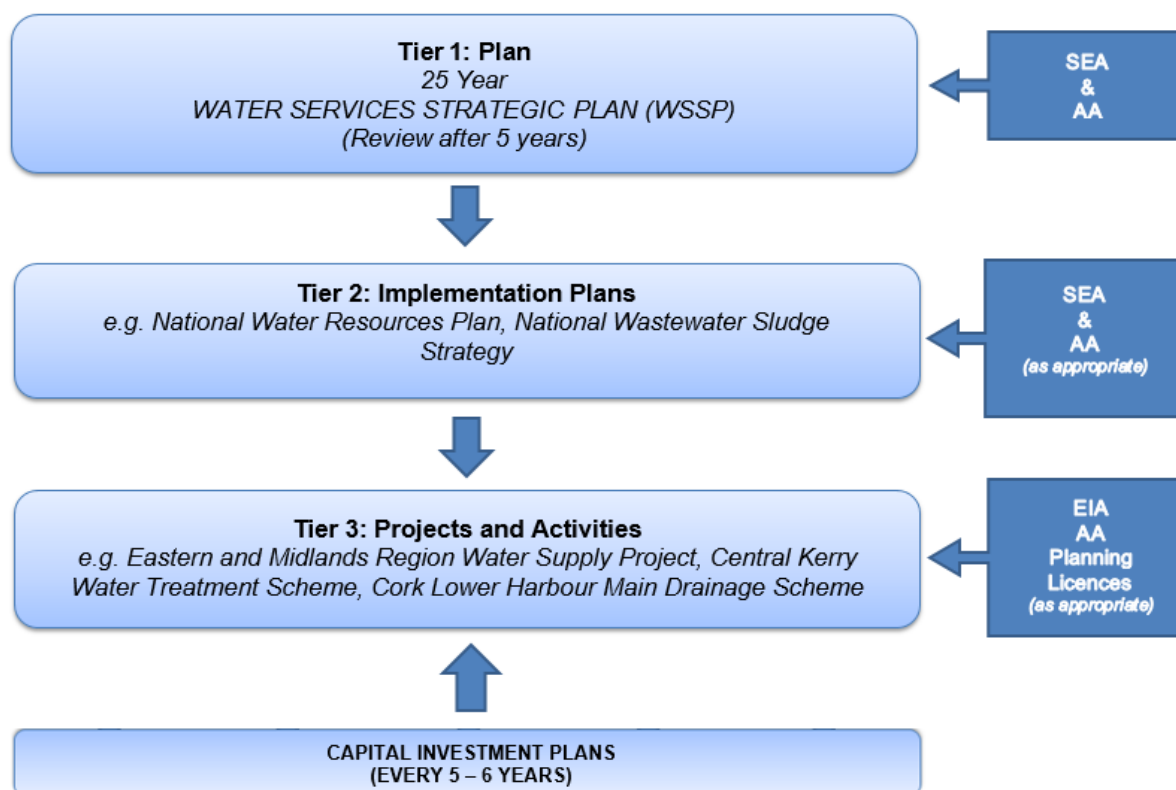


Figure 2-1 Hierarchy of Irish Water Plans and Environmental/Planning Inputs

2.2 Need for the NWRP

Irish Water has a statutory responsibility to ensure the proper and effective management of water resources across the country, and to ensure all customers have access to drinking water.

In order to ensure this, Irish Water needs to identify where any existing or future issues may occur and provide sustainable, safe and cost-effective solutions. The NWRP will help Irish Water meet these objectives throughout Ireland so that people have access to drinking water while our natural environment is protected.

2.3 Scope of the NWRP

The NWRP is a plan identifying how to provide safe, secure and reliable water supply to our customers for the next 25 years, without causing adverse impact on the environment.

The objective of the NWRP is to set out how we intend to maintain the balance between supply and demand for drinking water over the short, medium and long term.

The following activities will be undertaken in development of the NWRP:

- Assess the availability of water resources at a national level (including lakes, rivers and groundwater);
- Assess the current and future water demand from homes, businesses, farms, and industry;
- Identify areas where there are current and potential water supply shortfalls taking into account normal and extreme weather conditions;
- Develop and assess options to help meet potential shortfalls in water supplies;
- Consider the impacts of climate change on Ireland's water resources;
- Develop a drought plan identifying potential actions to be taken before, during and after a drought; and
- Develop a plan that sets out how we deal with the material that is produced as a result of treating drinking water.

2.4 Related Irish Water Plans and Strategies

As illustrated in Figure 2-1, the NWRP falls into a wider hierarchy of plans and strategies. The relevance of some of these plans and strategies are explained below.

2.4.1 Water Services Strategic Plan

The WSSP is the highest tier Irish Water asset management plan as discussed in Section 2.1 and illustrated in Figure 2-1. It sets the overarching framework for detailed implementation plans including the NWRP and specific water services projects. The NWRP is just one of the implementation plans developed to achieve the strategies of the WSSP.

A key relevant aim of the WSSP is 'reducing drinking water quality problems' and a key aim is to 'manage the sustainability and quality of drinking water from source to tap to protect human health'.

The WSSP also sets out the long-term action (to aid the achievement of Irish Waters environmental and sustainability aims) in relation to the management of water treatment plant residual waste (or clean water sludge) produced at water treatment plants under the control of Irish Water. The implementation of this action in relation to the management of clean water sludge will form part of the NWRP as this forms part of the infrastructure and investment decisions on the need and is linked to future water resource planning.

2.4.2 Other Related Tier 2 Plans

National Wastewater Sludge Strategy (NWSS)

The NWSS is another Tier II plan which sets out the long-term strategy for the management of wastewater sludge produced at wastewater treatment plants under the control of Irish Water.

Lead in Drinking Water Mitigation Plan

In 2015 the Government published the National Strategy to Reduce Lead in Drinking Water. The main aim of strategy was to ensure the protection of human health and achieve a solution to the issue of lead in drinking water. As the national public water utility, Irish Water developed the Lead in Drinking Water Mitigation Plan in order to address the risk of failure to comply with the drinking water quality standard for lead due to lead pipework.

2.5 Objectives of the NWRP

Through the data collection and initial review that has been undertaken to date for the NWRP it is apparent that the quality of the data would not be sufficient to undertake robust assessments on water supply and demand or option development at this stage. The current confidence grading of the data was considered too low to provide the foundations for a 25 year investment plan. Therefore, the first NWRP will focus on ensuring suitable methodologies are in place and identifying the data that needs to be captured to ensure subsequent NWRPs can make more robust recommendations. The objectives of the first NWRP are to:

- Develop a validated inventory of water resource zones to be used as the basis for water resource planning on a national basis.
- To produce robust methodologies to assess these water resource zones⁵ and the sources within them, in order to provide a sustainable, reliable source of water into the future, in terms of:
 - Water available for use;
 - Current and future demand;
 - Climate change impact;
 - Supply demand balance (SDB);
 - Identification and assessment of options to meet deficits;
 - Environmental impact; and
 - Option selection and recommendations.
- To develop a Water Treatment Plant Residuals Plan for the management, treatment and recovery/reuse/disposal of the liquid and solid residuals from Water Treatment Plants (WTPs).
- To develop a Drought Plan, which will set out the approach to monitoring and identifying a drought, and the actions that will be required to ensure that we can continue to protect water supplies and the environment.
- To develop a Plan (a Water Treatment Plant Residual Plan) that will outline how Irish Water will provide a resilient, good quality water service to all consumers on a sustainable, economic and environmental basis, over the next 25 years.

2.5.1 Geographical Scale of the NWRP

The NWRP covers Irish Water's operating area; Ireland. The first stage of the NWRP process is defining the Water Resource Zones (WRZ) within the country. 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). WSZs 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.

⁵ The largest possible zone in which all resources, including external transfers, can be shared and all customers experience a similar risk of supply failure from a resource shortfall.

WSZs in relation to key settlements in Ireland are illustrated in Figure 2-2 below. It is important to note that these are WSZ at the time of writing and the zones may change prior to publishing of the Draft NWRP.

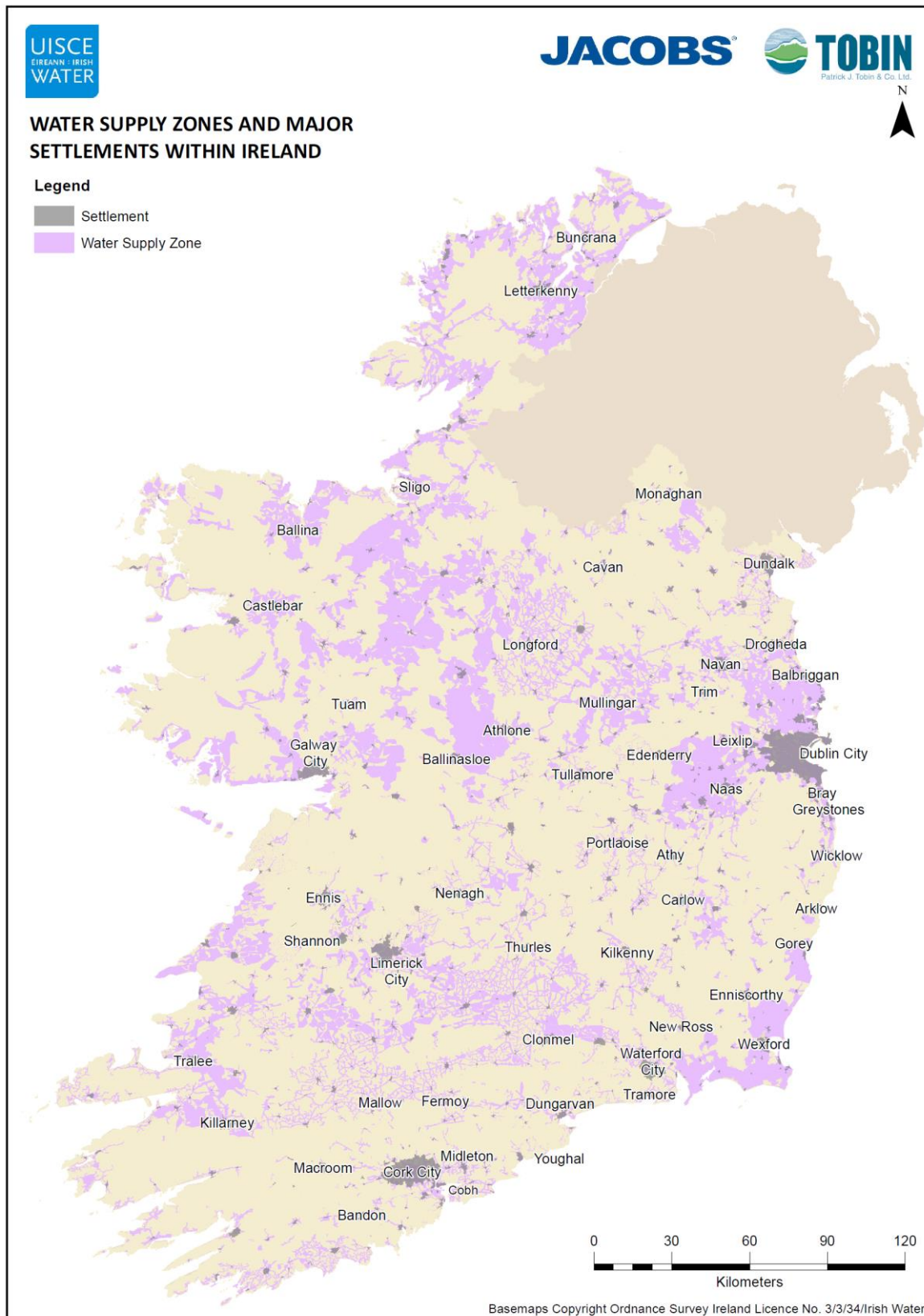


Figure 2-2 Water Supply Zones and Key Settlements

2.5.2 Temporal Scale

In line with the WSSP, the NWRP covers the national supply demand balance (SDB) on a 25 year basis and is reviewed at least every 5 years though more frequently in the early years. The NWRP will be published in summer 2018, with 2016 as the base year of the study. The NWRP will cover the 25 year period until 2041.

2.5.3 Transboundary Issues

The NWRP solely covers Irish Water’s operational area 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. The North Western River Basin District and Neagh-Bann River Basin District cross the land boundary into Ireland. Many catchments in Northern Ireland also cross the land boundary into Ireland.

2.5.4 Identification of Options

The aim of the NWRP 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.

To meet these deficits a list of potential option types has been developed as detailed in Table 2-1 below. The first NWRP will produce a robust methodology to assess the WRZ and the sources within them, in order to identify options (as outlined in Table 2-1) that could provide a sustainable, reliable source of water into the future.

Table 2-1 Water Resource Management Potential Option Types

NWRP Category	Description
New or enhanced abstractions	New locations for surface water or groundwater abstractions, or increasing the abstraction from existing sources.
Surface and/or Groundwater Catchment Management	Water quality issues can reduce water resource availability. Therefore, changes to land management or agricultural practices can improve water quality which could increase water resource availability. Note: It is difficult to assign water resource availability improvements to these.
Reservoirs	A large natural or artificial lake used as a storage space for raw water with man-made banks or natural topography.
Groundwater Aquifer Storage Recovery	Storing of water in groundwater aquifers for extraction during increased demand periods.
Effluent Reuse	The process of converting wastewater into water which can be reused for other purposes.
Desalination	The process of removing salt and other minerals from seawater to make it suitable for human consumption and/or industrial use.
Water Transfers	Transferring water from a remote source or from an area of surplus water to an area of deficit by means of trunk main, aqueduct, or even by tankering.
Demand Management	Water conservation and increased use of water efficiency measures which may include; leakage reduction, metering, marketing campaigns to raise awareness.
Conjunctive Use	Combining surface water abstraction and groundwater abstraction to allow periods for aquifer recovery and avoid surface water abstraction in low flow periods.
Water Treatment Plant	Improvement to WTP capacity, efficiency or deployable output.

3. AA Methodology

3.1 Guidance Documents in relation to AA

The AA requirements of Article 6 of the Habitats Directive 92/43/EEC (European Commission, 2001) follow a sequential approach as outlined in the following guidance documents and Departmental Circulars, namely:

3.1.1 Guidance Documents

The preparation of the screening for AA has taken account of guidance contained in the following documents:

- AA of Plans and Projects in Ireland: Guidance for Planning Authorities. DEHLG (2010);
- Assessment of plans and projects significantly affecting Natura 2000 sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission (2002);
- 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. DAHG (2012); and
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. European Commission (2000).

3.1.2 Departmental/National Parks and Wildlife Services (NPWS) Circulars

- AA under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10⁶.
- AA of Land Use Plans. Circular Letter SEA 1/08 & NPWS 1/08⁷.
- 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.
- Guidance on Compliance with Regulation 23 of the Habitats Directive. Circular Letter NPWS 2/07⁸.
- Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments. Circular L8/08⁹.

3.2 Data Sources Informing the AA Screening

The following general sources of information have been consulted for background environmental information:

- online data available on European sites as held by the NPWS from www.npws.ie – including site synopsis, conservation objectives and other relevant supporting documentation;
- GIS data for European site boundaries obtained in digital format online from the NPWS (downloaded July, 2017);
- favourable reference ranges and tabulated threats and pressures for QI species/habitats in the NPWS latest national conservation status assessments (NPWS, 2013a, 2013b); and
- Northern Ireland Environment Agency – online European site information www.doeni.gov.uk.

⁶ <https://www.npws.ie/sites/default/files/general/Circular%20NPW1-10%20&%20PSSP2-10%20Final.pdf> (accessed September 2017)

⁷ <https://www.npws.ie/sites/default/files/general/circular-sea-01-08.pdf> (accessed September 2017)

⁸ <https://www.npws.ie/sites/default/files/general/circular-npws-02-07.pdf> (accessed September 2017)

⁹ <https://www.npws.ie/sites/default/files/general/circular-L8-08.pdf> (accessed September 2017)

3.3 Guiding Principal and Case Law

A number of cases have been brought to both the National and European courts in relation to AA. Irish guidance in relation to AA was published over six years ago, while European guidance was published more than 10 years ago. Recent case law has therefore in many cases superseded this guidance. Relevant case law has been considered in the preparation of this screening for the Draft NWRP.

3.4 Stages of AA

The methodology in this report draws on, and has evolved from European Commission guidance (European Commission, 2002) and Irish guidance from the former Department of Environment, Heritage and Local Government (DEHLG, 2010). The entire process can be broken down into four stages (European Commission, 2002), as outlined below. The AA process progresses through four stages. 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 as follows:

- Stage 1: Screening – to determine that there will be no significant effects on a European site; or
- Stage 2: AA – to determine that there will be no adverse effects on the integrity of a European site; or
- Stage 3: Assessment of alternative solutions – to determine that there are no alternatives to the project or plan that is likely to have adverse effects on the integrity of a European site; or
- Stage 4: Assessment of compensatory measures – to determine that there are compensation measures which maintain or enhance the overall coherence of a European site.

Stage 1 – Screening for AA/Test of Significance - Screening determines whether Stage 2 AA is required by determining if the project or plan would be likely to have significant effect(s) on any European site(s) either alone or in-combination with other plans or projects. The test is a 'likelihood' of effects rather than a 'certainty' of effects. In accordance with the Waddenzee Judgement¹⁰ a likely effect is one that cannot be ruled out on the basis of objective information. This is underpinned by the precautionary principle which is enshrined in law in the Habitats Directive, and the test of beyond reasonable scientific doubt as presented in the Habitats Directive. The same judgement also adds "*where a plan or project not directly connected with or necessary to the management of the site is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site.*"

Stage 2 – AA – If the Screening has determined that AA is required, the competent authority then considers the effect of the project or plan on the integrity of the European site(s). The AA considers the structure and function of European sites, and their conservation objectives, and effects from the project/plan both alone and in-combination with other projects or plans. Where adverse effects on site integrity are identified, mitigation measures are proposed as appropriate to avoid negative effects. The AA process is documented within a NIS. This is provided to the competent authority by the applicant, to facilitate an informed assessment of the project.

Stage 3 – Assessment of Alternative Solutions – If following AA including proposal of mitigation, adverse effects on site integrity remain, or uncertainty remains, an Assessment of Alternatives is required. This process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site. This assessment may be carried out concurrently with Stage 2 in order to find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the European site, then the process either moves to Stage 4 or the project is abandoned.

Stage 4 – Imperative Reasons of Over-Riding Public Interest (IROPI)/Derogation - In the unlikely event where an Assessment of Alternatives was required, and only if this failed to identify any alternatives which would not adversely affect the European site, IROPI could potentially be enacted, whereby compensatory measures are implemented to maintain the coherence of the European site network in the face of adverse effects to site integrity.

It should be noted that for European sites that include 'priority' habitats or species (defined in Annex I and II of the Directive) as part of their Qualifying Interests, the demonstration of IROPI is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or safety considerations'. Where plans or projects meet these criteria, they may be accepted, provided adequate compensatory measures are proposed. Stage 4 of the process defines and describes these compensation measures, which must be agreed with the European Commission.

¹⁰ [ECJ case C-127/02]

3.5 Identification of European Sites

Current Irish departmental guidance on the zone of influence (Zol) to be considered during the AA process states 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”.

The NWRP is a National plan within the Republic of Ireland (ROI). Therefore, all European sites within the ROI were initially considered to be potentially within the Zol of the NWRP, while transboundary impacts to SACs and SPAs in Northern Ireland are also considered.

3.5.1 Conservation Objectives

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of annexed habitats and annexed species (Qualifying Interest) 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 Qualifying Interests (QIs) 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 Natura 2000 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 of that site. Both the generic and the site-specific COs aim to define the favourable conservation condition for habitats and species at the site level¹². 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 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, as well as the attributes and targets to maintain or restore the QIs/SCIs to a favourable conservation condition are available from the NPWS website¹³.

¹¹ <https://www.npws.ie/protected-sites> (accessed September 2017).

¹² <http://www.irishstatutebook.ie/eli/2011/si/477/made/en/pdf> (accessed September 2017).

¹³ <https://www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives> (Access September 2017)

4. 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 effects on European sites; and
- screening conclusion.

4.1 Is the NWRP exempt from assessment?

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

4.2 Description of the NWRP

An overview of the NWRP, including background and context are provided in Section 2 of this report.

4.3 Identification of Relevant European Sites

4.3.1 Natura 2000 Network in Ireland

Sites within the Natura 2000 Network are referred to as European sites and comprise SACs and 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 Annex I birds and other regularly occurring migratory birds and their habitats.

There are over 430 SACs in the ROI covering an area 13,500km² (see Figure 4-1 below). Approximately 53% is land, the remainder of sites being wholly aquatic or water-dependant (lakes, ponds, reservoirs, rivers, streams and wetlands). Aquatic species and habitats will be particularly significant to the NWRP. Over 150 SPAs (see Figure 4-1) have been designated for the protection of bird species and their habitats encompassing over 570,000 hectares of marine and terrestrial habitats. Many of the sites designated as SPAs have associated aquatic supporting habitat.

Given the potential for transboundary impacts to SACs and SPAs in Northern Ireland these sites are also considered. Table 4-1 provides a breakdown of European sites in Ireland (NPWS, n.d¹⁴.)

Table 4-1 Number of European Sites in Ireland and Northern Ireland¹⁵

Ireland	Northern Ireland
433 SACs + 6 offshore SACs	58 SACs
165 SPAs	16 SPAs

4.3.2 SACs

SACs have been designated covering a variety of habitat types recognised in Annex I of the Directive, with 16 habitats designated as 'priority' habitats owing to their ecological vulnerability (NPWS, 2013a). In addition, the same Directive, recognises 26 Annex II species. Habitats for which SACs are designated include raised bogs, blanket bogs, turloughs, sand dunes, lakes, rivers, woodlands, estuaries etc. Some of the species for which SACs have been

¹⁴ <https://www.npws.ie/protected-sites> (accessed September 2017).

¹⁵ Figures correct at the time of writing (data downloaded from NPWS website August 2017).

designated include but are not limited to Atlantic salmon (*Salmo salar*), otter (*Lutra lutra*), bottlenose dolphin (*Tursiops truncatus*), freshwater pearl mussel (*Margaritifera margaritifera*) and Killarney fern (*Trichomanes speciosum*).

4.3.2.1 Water Dependant Habitats and Species in the SAC network

The NPWS have identified 44 different water dependent habitat types and 22 water dependent species. Of these the freshwater pearl mussel is considered to be a highly sensitive surface water dependent species in Ireland, and coastal lagoons a highly sensitive water dependent habitat (EPA, 2016). Of the water species are at Favourable Conservation Status. 367 SACs in the ROI have at least one water dependent Annex I listed habitat or Annex II listed species listed as a Qualifying Interest (Mayes, 2008).

4.3.3 SPAs

The majority of the breeding seabirds and wintering water birds are considered to be regularly occurring migratory birds; over 60% of 25 Annex I listed species that occur in the ROI on a regular basis belong to the breeding seabird and wintering water bird groups. This has in part led to the situation that the majority (> 80%) of Ireland's SPAs are designated for these two bird groups (NPWS, n.d¹⁶.)

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

The remaining SPAs include inland wetland sites important for wintering water birds and extensive areas of blanket bog and upland habitats that provide breeding and foraging resources for species including merlin (*Falco columbarius*) and golden plover (*Pluvialis apricaria*). Agricultural land represents a share of the SPA network ranging from the extensive farmland of upland areas where its 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.

¹⁶ <https://www.npws.ie/protected-sites> (accessed September 2017).

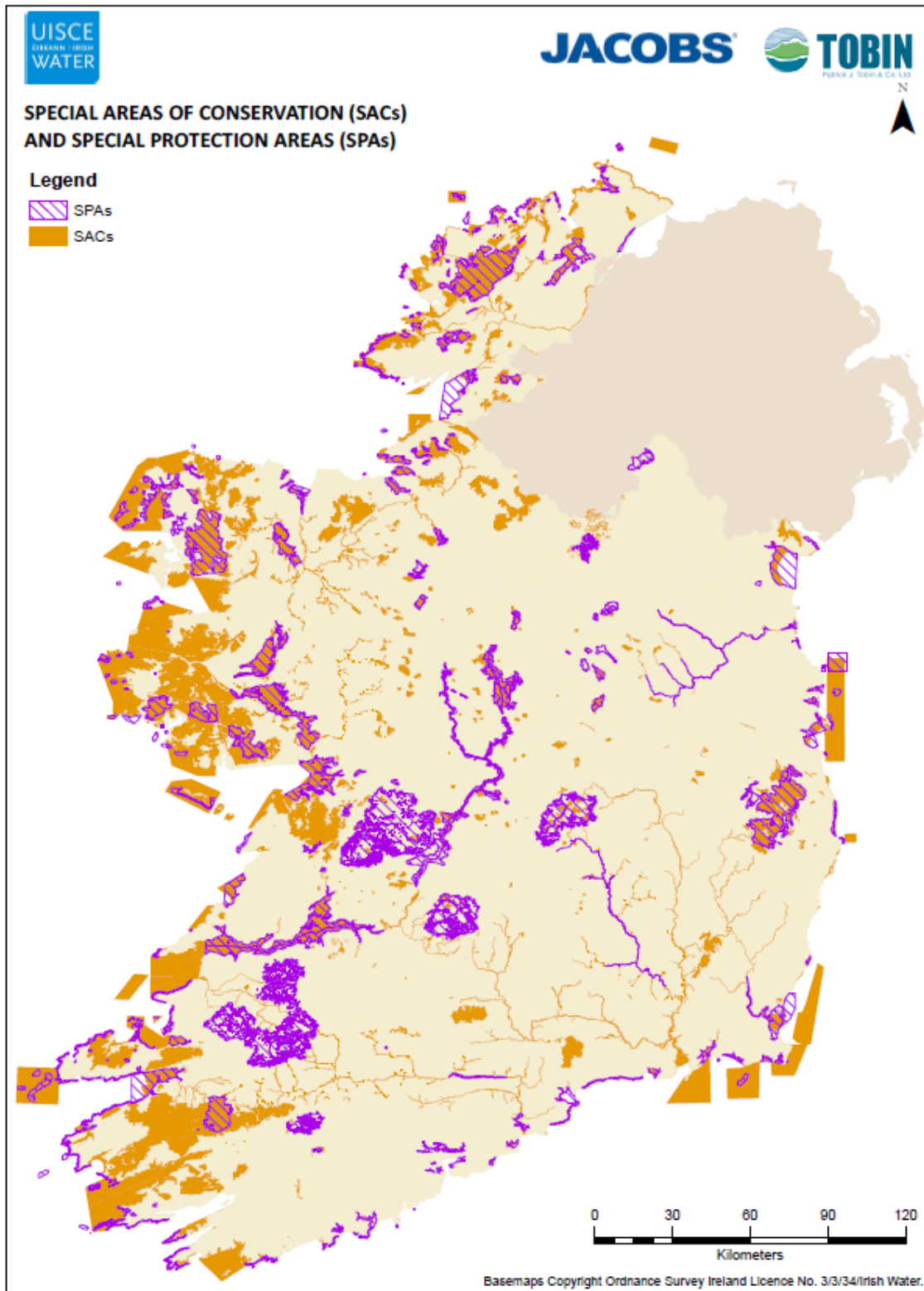


Figure 4-1 Distribution of European Sites in the Republic of Ireland

4.4 Water Framework Directive

There is some overlap with the Birds (79/409/EEC (2)) and Habitats (92/43/EEC (1)) Directives (BHD) and the Water Framework Directive (WFD) in relation to the protection of water dependant 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 Habitats and Birds Directive 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”.

4.5 Assessment of Likely Effects

The first cycle of the NWRP will involve the production of a methodology to be applied in subsequent iterations of the NWRP, specifically to identify suitable water resource management options throughout the country. The NWRP itself is not considered to have likely significant effects. However, the potential water resource management option types arising from the NWRP are considered to have potential to result in likely significant effects on European sites in the absences of mitigation.

The methodology for option selection will take the protection of European sites into consideration in the screening process. However, other factors such as resilience, water availability etc. will also need to be considered. Such factors may in some cases have a higher weighting in the selection process, therefore at this stage potential impacts on European sites cannot be excluded as a result of the implementation of the NWRP.

Table 4-2 outlines the possible significant effects associated with the various 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 (e.g. surface and/or groundwater catchment management). The implementation of the Draft NWRP may give rise to measures, in the absence of mitigation, that could result in a variety of possible effect pathways through (see Table 4-2), but not limited to:

- species mortality;
- habitat loss and/or fragmentation;
- disturbance (noise, vibration, movement, lighting);
- changes in water quality; and
- changes in hydrology.

Table 4-2 Potential LSEs in the Absence of Mitigation resulting from the Draft NWRP

NWRP Category	Description	Potential LSEs
New or enhanced abstractions	New locations for surface water or groundwater abstractions, or increasing the abstraction from existing sources.	Where new 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 dependant receptors would be most at risk.
Surface and/or Groundwater Catchment Management	Water quality issues can reduce water resource availability. Therefore, changes to land management or agricultural practices can improve water quality which could increase water resource availability. Note: It	None predicted. Potential for positive impacts on aquatic receptors if water quality in the catchment is improved.

NWRP Category	Description	Potential LSEs
	is difficult to assign water resource availability improvements to these.	
Reservoirs	A large natural or artificial lake used as a storage space for raw water with man-made banks or natural topography.	This option type could result in changes in hydrology potentially altering the aquatic environment and impacting on aquatic receptors. Potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation.
Groundwater Aquifer Storage Recovery	Storing of water in groundwater aquifers for extraction during increased demand periods.	Construction of new storage facility has the potential for direct, indirect and cumulative effects on SACs and SPAs in the absence of mitigation. Operational effects such as biological/ chemical pollution of groundwater sources may also effect receptors.
Effluent Reuse	The process of converting wastewater into water which can be reused for other purposes.	None predicted. Any discharges to watercourses would be subject to the same requirements as any Wastewater Treatment Works (WWTW) discharge. Treated either at site or transferred to a WWTW where it would be combined with all other sewerage waste and treated to the required water quality standard before discharge.
Desalination	The process of removing salt and other minerals from seawater to make it suitable for human consumption and/or industrial use.	Potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation.
Water Transfers	Transferring water from a remote source or from an area of surplus water to an area of deficit by means of trunk main, aqueduct, or even by tankering.	Potential for direct, indirect, construction, operational and cumulative effects on SACs and SPAs in the absence of mitigation. In particular, the transfer of invasive species from one area to another could be a key risk.
Demand Management	Water conservation and increased use of water efficiency measures which may include; leakage reduction, metering, marketing campaigns to raise awareness.	None predicted. Potential for positive impacts.
Conjunctive Use	Combining surface water abstraction and groundwater abstraction to allow periods for aquifer recovery and avoid surface water abstraction in low flow periods.	None if using existing abstraction licences (impacts of new or increased abstractions noted above). Potential for positive impacts on aquatic receptors.
Water Treatment Plant	Improvement to WTP capacity, efficiency or deployable output.	Potential for direct, indirect, operational and cumulative effects on SACs and SPAs in the absence of mitigation.

4.5.1 In-Combination Effects

Under Article 6(3) of the Habitats Directive an assessment of in-combination effects of the Draft NWRP with other plans and projects is considered. Consideration has been given, at this stage of the Draft NWRP, 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;

- Draft Forestry Programme 2014-2020: Ireland (DAFM, 2014).

- Draft National Bioenergy Plan (DCENR, 2014).
- Draft National Planning Framework. Ireland 2040 Our Plan (DHPLG, 2017).
- Draft River Basin Management Plan (DHPLG, 2017).
- Lead in Drinking Water Mitigation Plan (Irish Water, 2015).
- National CFRAM programme.
- National Climate Change Adaptation Framework (DoECLG, 2012).
- National Climate Change Strategy (DoEHLG, 2007).
- National Policy Position on Climate Action and Low Carbon Development (DoECLG, 2014).
- National Renewable Energy Action Plan (NREAP) (DECNR, 2010).
- National Wastewater Sludge Management Plan (Irish Water, 2016).
- Regional Waste Management Plans (2015).
- River Basin Management Plans (2010).
- Strategy for Renewable Energy (DCENR, 2012).
- Sustainable Development: A strategy for Ireland (DoEHLG, 1997).
- The National Spatial Strategy 2002-2020 (DoEHLG, 2002).
- Water Services Strategic Plan (Irish Water, 2015).

Given the level of detail that is available for the Draft NWRP and the potential for likely significant effects (Table 4-2), in-combination effects as a result of implementation of the NWRP cannot currently be ruled out.

5. Screening Conclusion

Stage 1 of the AA process (Screening for AA) described herein relates to the Draft NWRP. The Draft NWRP is a National scale plan covering all regions in the country with potential transboundary implications. Given the strategic nature of the NWRP, the current stage of preparation and in light of a number of uncertainties relating to the implementation of the NWRP going forward, it is considered that there is potential for likely significant effects on one or more European sites, in view of the sites conservation objectives. In the absence of more detailed information on the NWRP 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 NWRP is required. This will be presented in a NIS to fully inform the AA to be undertaken by Irish Water.

6. References

DEHLG (2010) Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, Dublin.

Department of Agriculture, Food and the Marine (2014). Draft Forestry Programme 2014-2020: Ireland.

Department of Communications, Energy and Natural Resources (2012). Strategy for Renewable Energy 2012 - 2020.

Department of Environment, Community and Local Government (2012). National Climate Change Adaptation Framework.

Department of Housing, Planning & Local Government (2002). The National Spatial Strategy 2002-2020.

Department of Housing, Planning & Local Government (2007). National Climate Change Strategy.

Environmental Protection Agency (2016). State of the Environment Report.

Environmental Protection Agency (2010). River Basin Management Plans.

Environmental Protection Agency (2015). Regional Waste Management Plans.

European Commission (2000a). Managing Natura 2000 sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC.

European Commission (2000b). Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg.

European Commission (2001). Assessment of Plans and Proposed Schemes Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.

European Commission (2002). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg.

European Commission (2007). 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 European Commission.

European Commission (2011). Links between the Water Framework Directive (WFD 2000/60/EC) and Nature Directives (Birds Directive 2009/147/EC and Habitats Directive 92/43/EEC).

Irish Water (2015). Lead in Drinking Water Mitigation Plan.

Irish Water (2015). Water Services Strategic Plan.

Irish Water (2016). National Wastewater Sludge Management Plan.

Mayes (2008). Water Framework Directive Annex IV Protected Areas: Water Dependant Habitats and Species and High Status Sites.

NPWS (2012). Marine Natura Impact Statements in Special Areas of Conservation. A working Document, April 2012.

NPWS (2013a) The Status of EU Protected Habitats and Species in Ireland. Habitat Assessments Volume 2. Version 1.1. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

NPWS (2013b) The Status of EU Protected Habitats and Species in Ireland. Species Assessments Volume 3. Version 1.0. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Office of Public Works. National CFRAM programme.

Screening for Appropriate Assessment

Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants (2006). Appropriate Assessment of plans.