



Ringsend Wastewater Treatment Plant | Upgrade Project Environmental Impact Statement and Natura Impact Statement



Scoping Document March 2016



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Glossary & Defined Terms

Acronym	Description
AA	Appropriate Assessment
ABP	An Bord Pleanála
AGS	Aerobic Granular Sludge
BOD	Biochemical Oxygen Demand
C	Carbon
CAFÉ	Clean Air for Europe Directive
DCC	Dublin City Council
DIN	Dissolved Inorganic Nitrogen
ECJ	European Court of Justice
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESB	Electrical Supply Board
Estuary	Transitional area at the mouth of a river between freshwater and coastal waters
EU	European Union
Firm Capacity	Defined as the treatment capacity available when one of the plant's largest processing units is unavailable due to routine maintenance or repair
FOG	Fats Oils and Grease
GDD	Greater Dublin Drainage
GDSDS	Greater Dublin Strategic Drainage Study
HGV	Heavy Goods Vehicle
LSOT	Long Sea Outfall Tunnel
MRP	Molybdate Reactive Phosphate
N	Nitrogen
NDP	National Development Plan
NHA	National Heritage Area
NIS	Natura Impact Statement
NSS	National Spatial Strategy
P	Phosphorous
PE	Population Equivalent
pNHA	Potential National Heritage Area
Poolbeg Peninsula	Land on which the WwTP is sited
Population Equivalent	The amount of wastewater received at a treatment plant (and its design capacity) is measured in units known as population equivalent (or PE). The wastewater received from all sources, e.g. industrial, tourism, commercial, residential, etc., is converted into these units, with one unit of PE representing the wastewater treatment load typically generated by a single person.
SAC	Special Area of Conservation
SBR	Sequencing Batch Reactor

SEA	Strategic Environmental Assessment
SIA	Stable Isotope Analysis
SID	Strategic Infrastructure Development
Sludge	Solid by-products of wastewater treatment.
SPA	Special Protection Area
SS	Suspended Solids
WFD	Water Framework Directive
WwTP	Wastewater Treatment Plant

Executive Summary

In January 2014, Irish Water assumed responsibility for the provision of public water services, which included the transfer of responsibility for the Ringsend Wastewater Treatment Plant from Dublin City Council.

The Ringsend plant has been providing wastewater treatment to the city of Dublin since 1906. The current plant is the largest treatment plant in Ireland. Since it was commissioned in 2003, the Ringsend plant has been treating wastewater from the Greater Dublin Area, including parts of Meath.

Today, the plant is operating over its design capacity and needs to be upgraded to ensure that the Greater Dublin Area has appropriate wastewater treatment to enable continued social and economic development.

Maximising the treatment capacity of the Ringsend plant together with the proposed development of a new regional wastewater treatment plant in North Dublin at Clonsaugh (known as the 'Greater Dublin Drainage' or GDD project) will help meet the current and future infrastructural requirements of the Greater Dublin Area. This will ensure that wastewater generated in the region, as its population continues to grow and industrial needs continue to expand, is appropriately treated in order to safeguard human health and to protect the environment.

In 2012, An Bord Pleanála granted permission to Dublin City Council to upgrade the plant and increase its capacity, based on technologies available at the time. The project approved in 2012 included the construction of a 9km long sea outfall tunnel to relocate the discharge of treated effluent from the Ringsend Plant out into Dublin Bay. Since that time, Irish Water has been reviewing the project and an alternative solution is now being proposed.

Irish Water has identified an advanced nutrient reduction treatment technology that was not available as an option to the City Council in 2012. This technology is known as Aerobic Granular Sludge (AGS) and would allow the discharge of treated wastewater to remain at its current location, thereby avoiding the need to construct the 9km long sea outfall tunnel that was proposed in the 2012 planning application.

Irish Water intends to apply to An Bord Pleanála later this year for permission to implement the alternative solution. The revised project being proposed by Irish Water is very similar to that approved by An Bord Pleanála in 2012. However, there is one major difference:

- Instead of treating the wastewater to a slightly lower standard than at present and discharging it 9km out in Dublin Bay, it is now proposed to treat it to a much higher standard and to continue to discharge treated effluent at the current location on the Lower Liffey Estuary.

The revised project being proposed by Irish Water is very similar to that approved by An Bord Pleanála in 2012. In particular, it should be noted that:

- No increase in capacity over that approved in 2012 is being proposed; and
- The revised project will meet the same stringent odour control standards as set out by An Bord Pleanála in 2012.

The revised project will maximise the treatment capacity of the Ringsend Plant, increasing it from 1.64m PE. to 2.4m PE. This will give the plant a 'firm' capacity of 2.1m PE. The project will use most

of the remaining unused space within the current site to provide additional treatment facilities and equipment. The revised project includes:

- Increasing the flow through the plant by approx. 20% thereby increasing the amount of wastewater that can be treated and reducing the level of storm overflows which occur during heavy rainfall events;
- Provision of a new 0.4 million PE (400,000 PE) extension in biological (AGS) treatment capacity, on a site reserved for that purpose within the existing boundary;
- Installation of the AGS technology in the existing treatment tanks on site, increasing their nominal capacity to 2.0 million PE, to give an overall capacity of 2.4 million PE;
- Expansion of the plant's sludge treatment facilities to match the increase in wastewater treatment capacity;
- Provision of a new phosphorous recovery process; and
- Provision of additional odour control facilities and other site works.

From an operational and visual perspective, the revised project is not expected to result in any significant change on the site of the plant from the project approved in 2012. The main change will occur outside the site due to the proposed omission of the 9km long sea outfall tunnel.

On large scale infrastructure projects of this nature, a comprehensive Environmental Impact Statement (EIS) and a Natura Impact Statement (NIS) are required to be submitted to An Bord Pleanála as part of the planning process. The factors that must be included in an EIS are set out in national and European legislation.

The scoping report is a key element of the EIA process and signifies commencement of the development of an EIS. 'Scoping' is the process of deciding what information should be contained in an EIS and what methods should be used to gather and assess that information. Following the publication of the scoping report, consultation with the public and key stakeholders can commence. Consultation will allow for input from the interested parties and aid in identifying areas which may require further scrutiny during the preparation of the EIS. During the consultation process Open Days will be held in Sutton, Clontarf, Ringsend, Killiney and Ringsend. These open days will allow the public to inform themselves about the project and to raise any concerns or queries about it with the Irish Water Project team.

The objectives of the scoping process being undertaken for the project are to:

- Provide a description of the proposed scheme and to inform the public and key stakeholders;
- Identify the potential impacts and issues that are proposed to be the focus of the EIS;
- Define the scope of the study for each of the EIS topics and issues to be considered;
- Identify data and information available and additional surveys and investigations required;
- Define the methods and criteria to be used in predicting and evaluating impacts;
- Identify alternatives and mitigation measures to be considered as part of the project, and to
- Determine the proposed content, structure, and format of the Environmental Impact Statement.

Irish Water is now inviting comment and submissions from the public and interested parties on the issues to be considered in the EIS and the NIS, as part of an eight-week consultation process. The aim of the public consultation is to ensure that the EIS and the NIS address all issues of potential impact or concern, and that the assessments of the project are as comprehensive as possible.

The Figure below illustrates the project roadmap of the planning application. As shown in the figure Irish Water is currently undertaking the scoping of the EIS and NIS which marks the commencement of the preparation of these documents.

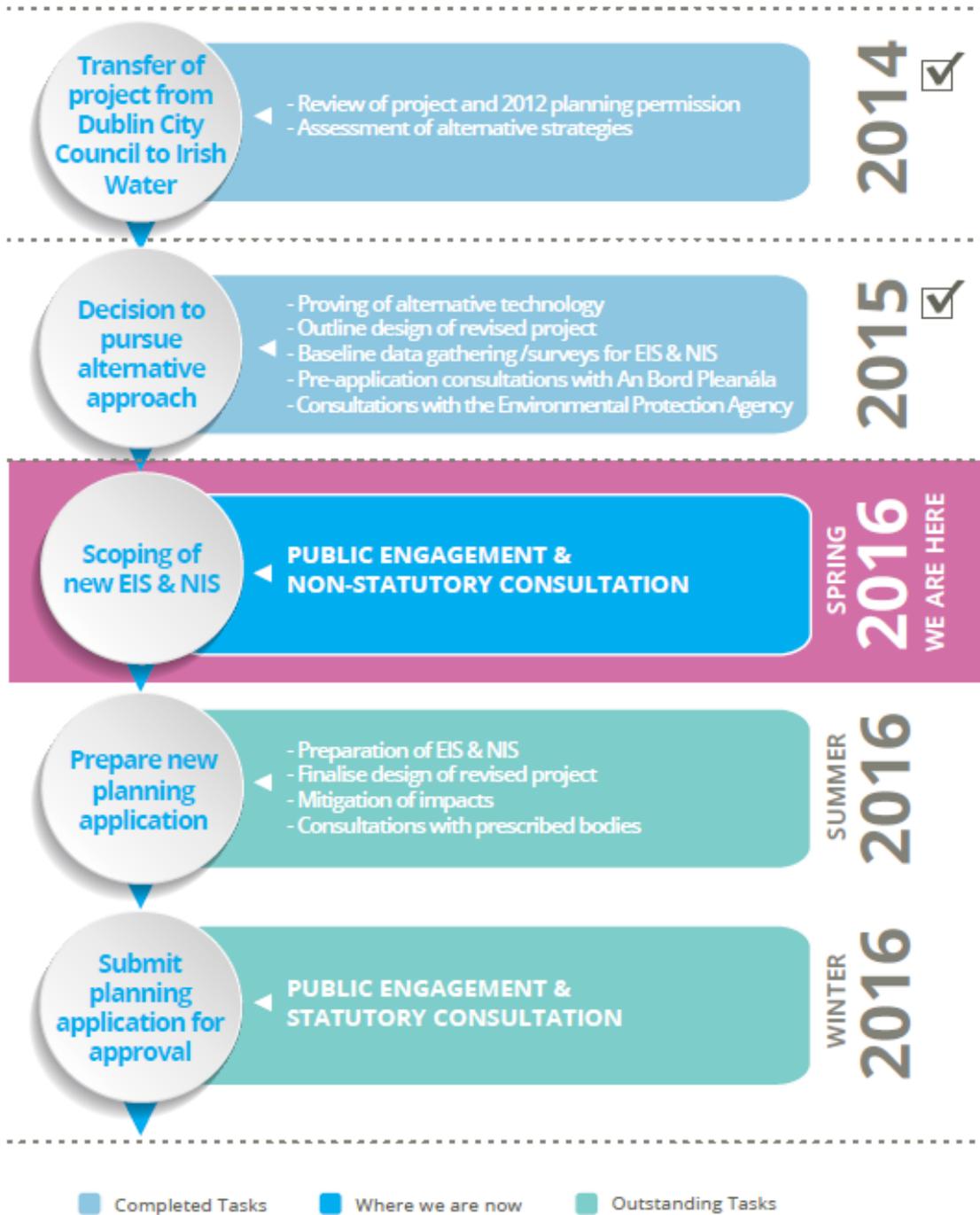


Figure - Project Roadmap

Section 1: Introduction

1.1 Project Background

In January 2014, Irish Water assumed responsibility for the provision of public water services, which included the transfer of responsibility for the Ringsend Wastewater Treatment Plant (WwTP) from Dublin City Council.

The Ringsend plant has been providing wastewater treatment to the city of Dublin since 1906. The current plant is the largest treatment plant in Ireland. Since it was commissioned in 2003, the Ringsend plant has been treating wastewater from the Greater Dublin Area, including parts of Meath.

Today, the plant is operating over its design capacity and needs to be expanded. In addition, since the current plant was designed and constructed more stringent treatment standards have come into force. In 2001, the Liffey Estuary was designated a ‘sensitive’ water under the EU’s Urban Waste Water Treatment Directive. This requires the plant to remove nutrients (i.e. nitrogen and phosphorous) from its effluent before it can be discharged. Consequently, in addition to being expanded, the plant’s treatment processes also need to be upgraded to be able to meet these higher standards.

Maximising the treatment capacity of the Ringsend plant together with the proposed development of a new regional wastewater treatment plant in North Dublin at Clonsaugh (known as the ‘Greater Dublin Drainage’ or GDD project) will help meet the current and future infrastructural requirements of the Greater Dublin Area. This will ensure that wastewater generated in the region, as its population continues to grow and industrial needs continue to expand, is appropriately treated in order to safeguard human health and to protect the environment. The Ringsend WwTP is shown in Figure 1-1 (and Drawing 1 of Appendix A) with the site boundary outlined in yellow.



Figure 1-1 - Ringsend Wastewater Treatment Plant

1.2 Existing Ringsend WwTP

The existing Ringsend WwTP shown in Figure 1-2 (and Drawing No. 2 in Appendix A) provides a number of different treatment processes to cater for the influent load experienced at the plant, including:

- Preliminary Treatment - which includes management of stormwater flows, removal of inorganic solids (grit and screenings) and removal of fats oils and greases (FOGs);
- Primary Treatment - which comprises removal of gross organic solids;
- Secondary Treatment - which comprises the removal of suspended and dissolved pollutants. The secondary treatment process at Ringsend is operated in what is known as ‘nitrifying’ mode. This mode of operation converts nitrogen from its ‘ammoniacal’ form into its ‘nitrate’ form and is required to protect fish in the vicinity of the discharge location and its mixing zone.
- Disinfection (during the bathing water season) - which comprises reduction in pathogens, and other micro-organisms;
- Sludge Treatment – which comprises the conversion of waste solids into reusable biosolids, including the creation of biogas fuel and the destruction of pathogenic organisms; and
- Odour Treatment - which comprises the capture of, and reduction in, odorous compounds created by the different process streams.

The treatment process results in two primary emissions from the plant, as follows:

- Final treated effluent - discharged to the Lower Liffey Estuary (c. 1km east of the plant beside ESB Poolbeg Power Station – refer to Figure 1-2) in accordance with a discharge authorisation licence issued by the EPA; and
- Biosolid product – the Ringsend Plant produces up to c. 25,000 tonnes of pasteurised biosolids each year. This material is recovered to agricultural lands in South Leinster in accordance with national regulations and EU Directives, including the European Union (Good Agricultural Practice for Protection of Waters) Regulations and the Waste Management (Use of Sewage Sludge in Agriculture) Regulations.



Figure 1-2 - Ringsend WwTP and Discharge Location

1.3 Greater Dublin Strategic Drainage Study (GSDS)

The Greater Dublin Strategic Drainage Study undertook a strategic analysis of the existing foul and surface water systems in the local authority areas of Dublin City, Fingal, South Dublin, Dun Laoghaire Rathdown and the adjacent catchments in Meath, Kildare and Wicklow. The objectives of the study were to identify the policies, strategies and projects for developing a sustainable drainage system. The final strategy of this study was the subject of a strategic environmental assessment in 2008, following which all of its recommendations were adopted and included in the plans and policies of the participating local authorities.

The GSDS sets out a comprehensive and holistic strategy to address the deficiencies in the Greater Dublin Area's drainage and treatment systems, and to provide a blueprint for the sustainable growth of the region well into the future. The GSDS's recommendations are multi-faceted and involve a wide range of measures at policy, management, and operational level, in addition to a programme of projects at the infrastructure level.

A fundamental principle of the GSDS strategy is that the capacity and potential of all of the existing drainage systems and wastewater treatment plants in the Greater Dublin Area should be maximised first before any additional new infrastructure is provided. In that regard, the strategy specifically recommended that the Ringsend WwTP be expanded to the maximum capacity achievable within the confines of the existing site. However, the GSDS highlighted that a significant shortfall in wastewater treatment capacity would still exist in the region within the lifetime of the plan, even after all seven existing treatment plants, including the Ringsend plant, had been developed to their maximum potential. The GSDS concluded that an additional regional wastewater treatment plant was required in the North Dublin area to meet this future shortfall in capacity. This latter project is known as the Greater Dublin Drainage Project (or GDD) and is currently in the planning stage.

1.4 Upgrade Project approved in 2012

In April 2012, Dublin City Council made a planning application under Section 226 of the Planning and Development Acts 2000 (as amended). Planning Approval was granted in November 2012 for the construction and operation of a secondary treatment expansion to the Ringsend Wastewater Treatment Plant (WwTP) An Bord Pleanála Ref 29N.YA0010. The planning approval covered three key areas:

- Phase 1 - Immediate or Surgical Upgrades to facilitate a number of incremental improvements in process performance and to facilitate the extension in secondary treatment capacity under Phase 2;
- Phase 2 - Provision of additional secondary treatment capacity of 400,000PE on a 0.8 ha area on the WwTP site specifically reserved for that purpose; and
- Phase 3 - Construction of a c. 9 km Long Sea Outfall Tunnel (LSOT) to relocate the discharge of treated effluent from its current point in the designated sensitive area of the Liffey Estuary, to a point far out in Dublin Bay as shown in Figure 1-3.

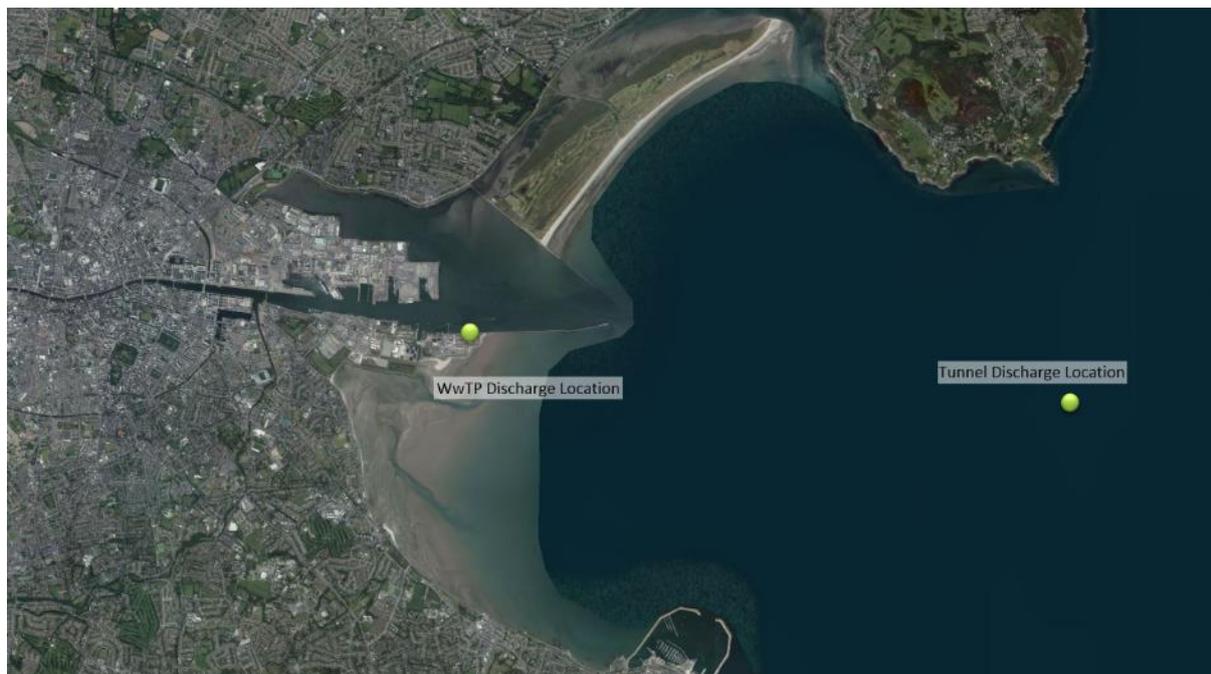


Figure 1-3 - Long Sea Outfall Discharge Location

The approach adopted by Dublin City Council (and approved by An Bord Pleanála) in 2012 was to remove the effluent discharge from its current location and to relocate it to Dublin Bay where the nutrient removal standards do not apply. Given the nutrient removal technologies available at the time, this was deemed a better option than leaving the discharge within the sensitive waters and seeking to treat to the higher standard.

At the proposed new discharge location two of the existing plant's treatment processes were deemed no longer necessary (nitrification and disinfection). Consequently, the approved project provided for the plant's secondary treatment process to operate in standard ('carbonaceous') mode only and to also omit disinfection during the bathing water season.

1.5 Proposed Alternative Approach

Irish Water has identified an advanced nutrient reduction treatment technology that was not available as an option to the City Council when it sought planning consent in 2012. This technology is known as Aerobic Granular Sludge (AGS). This technology can treat wastewater to the much higher standards now required and would allow the discharge of treated wastewater to remain at its current location. If this technology was implemented at Ringsend, the 9km long sea outfall tunnel proposed in 2012 could be omitted as it would no longer be required. However, this approach requires a further planning approval from An Bord Pleanála before it can be implemented.

The AGS technology is a significant advance in the development of the activated sludge process. The activated sludge process has been in use for over 100 years and is the main wastewater treatment process used around the world. The AGS process will consistently produce a very high-quality effluent, which can be safely and sustainably discharged into the designated sensitive waters of the Liffey Estuary. The technology offers significant advantages over conventional secondary treatment processes as detailed in the following paragraphs.

The AGS technology has two major advantages over the conventional activated sludge process currently implemented at Ringsend. The first arises from the nature of the biomass developed by the

technology. Whereas a conventional activated sludge biomass typically comprises flocs, which are relatively lightweight and settle very slowly, an AGS biomass forms granules, which are noticeably heavier than the surrounding liquid. The AGS granules separate and settle rapidly from the final effluent compared to activated sludge flocs, thus resulting in more time being available to treat the wastewater. In addition, the nature and properties of the AGS granules permit more biomass to be held within any given tank. These advantages are complimentary and result in the AGS technology being able to treat considerably more wastewater per unit volume than conventional activated sludge. In a 'greenfield' situation, this would typically mean a much smaller site footprint using the AGS technology (than conventional activated sludge) for the same plant capacity. In a 'retro-fit' or 'brownfield' situation (as at Ringsend) it means that much greater treatment capacity can be achieved within the existing tank volumes.

The second major advantage of the AGS technology is that its biomass granules also undertake biological nutrient removal (of both nitrogen and phosphorous) as part of its normal treatment cycle. In comparison, the activated sludge process installed at Ringsend would require a number of additional process stages/streams to achieve nutrient removal thus further reducing the volume of wastewater that can be treated within the same volume or site area. This was one of the main reasons that Dublin City Council chose the approach it did in the 2012 application for the project.

In addition to the foregoing, the AGS technology possesses further advantages (when compared with the nutrient removal alternatives considered in the 2012 application) including: lower power consumption and greenhouse gas emissions, reduced sludge volumes, and little, if any, chemical consumption.

The following are the advantages associated with the proposed new approach:

- If approved, the use of AGS technology would maximise efficiency, reduce risk and realise significant savings through eliminating the need to build the 9km undersea tunnel;
- A much higher effluent quality would be achieved and, even at full future capacity, emissions from the plant would be significantly lower than at present;
- In addition, the impacts of tunnel construction could be entirely avoided, including the 70,000 heavy goods vehicles involved in removing material excavated from the 9km long tunnel; and
- The revised approach provides for the recovery of phosphorus (a non-renewable resource), this finite resource would otherwise be discharged to Dublin Bay with the loss of its re-use potential in agriculture.

Irish Water has conducted trials of the technology to treat the wastewater arriving at the Ringsend plant. These trials have confirmed that the technology consistently produces a very high-quality effluent, which can be safely and sustainably discharged into the designated sensitive waters of the Liffey Estuary.

1.6 The Revised Project

The revised project being proposed by Irish Water is very similar to that approved by An Bord Pleanála in 2012. In particular, it should be noted that:

- No increase in capacity over that approved in 2012 is being proposed; and
- The revised project will meet the same stringent odour control standards as set out by An Bord Pleanála in 2012.

The revised project will maximise the treatment capacity of the Ringsend Plant, increasing it from 1.64m PE. to 2.4m PE. This will give the plant a ‘firm’ capacity of 2.1m PE. The project will use most of the remaining unused space within the current site to provide additional treatment facilities and equipment. The project includes:

- Increasing the flow through the plant by approx. 20% thereby increasing the amount of wastewater that is treated and reducing the level of storm overflows which occur during heavy rainfall events;
- Provision of a new 400,000 PE extension in biological (AGS) treatment capacity, on a site reserved for that purpose within the existing boundary;
- Installation of the AGS technology in the existing treatment tanks on site, increasing their capacity to 2.0m PE;
- Expansion of the plant’s sludge treatment facilities to match the overall increase in wastewater treatment capacity;
- Provision of a new phosphorous recovery process; and
- Provision of additional odour control facilities and other site works.

From an operational and visual perspective, the revised project is not expected to result in any significant change on the site of the plant from the project approved in 2012. The main change will occur outside the site due to the proposed omission of the 9km long sea outfall tunnel.

Drawing No. 3 in Appendix A provides a general overview of the various elements proposed to be included in the revised project. As stated in Section 4.1, the design of the project is not finalised and one of the main objectives of commencing EIS preparation at this point (i.e. Scoping Stage) is that it allows project options, environmental impacts, and mitigation measures to be considered and developed as part of an integrated design process. Accordingly, it is possible that elements of the revised project shown on Drawing No. 3 might be varied or omitted, or even new elements added when the formal planning application is finally submitted and goes on statutory public exhibition.

It should also be noted that current practice is to procure large-scale infrastructure projects by way of Design-Build (DB) or Design-Build-Operate (DBO) contracts. These contract forms are used because, by providing tenderers with more flexibility in preparing their designs than traditional contracts, they usually yield the best ‘value-for-money’ outcomes for clients and their customers. Where design options are proposed to be made available in this way, the EIS submitted with the planning application will consider and present the worst (or ‘least favourable’) impact associated with those options in each environmental topic.

Section 2: Regulatory Context and Planning History

The Planning Application and accompanying documentation will be prepared in line with relevant policy and legislation. The remainder of this section outlines the key legislation and policy documents [non exhaustive list] to be considered.

2.1 Planning and Development Legislation

The planning system in Ireland (and the control of development) is governed primarily by one piece of legislation, the Planning and Development Act 2000, and regulations made under this act. This act [hereafter the 'Planning Act'] has been amended a number of times since its introduction.

The Planning and Development (Strategic Infrastructure) Act 2006 made significant amendments to the Planning Act by changing the way applications for strategic infrastructure developments [or 'SID'] are managed and determined within the planning system.

Strategic infrastructure development ['SID'] can generally be described as development which is of strategic economic or social importance to the State or a region. It also includes development which will contribute significantly to the fulfilment of any of the objectives of the National Spatial Strategy or any regional spatial and economic strategy for an area, or which would have a significant effect on the area of more than one planning authority. The developments are listed in the 7th Schedule of the Planning Act. They are generally developments of a scale and type which require environmental impact assessment (EIA). Both public and private developments may be classified as SID, e.g. development by local authorities in their own functional area which requires EIA. Private development must first be certified by the Board (under Section 37B of the Act) as meeting the above criteria before being treated as SID.

The Planning Act provides for applications for SID being made directly to An Bord Pleanála (the Board). Before the introduction of the SID provisions such applications were made to the local planning authority for a decision with a subsequent right of appeal to the Board.

When lodged, an SID application and its EIS (and NIS if applicable) is made available for inspection and for purchase for a period of at least six weeks. Any person or body may make submissions to the Board within this period in relation to the implications of the proposed development for proper planning and sustainable development and for the likely effects on the environment of the proposed development. The Board may hold an oral hearing in relation to the development at its discretion. Before making its decision on the SID application the Board must consider all of the submissions and observations made to it. It must also carry out an environmental impact assessment (and if applicable an appropriate assessment – see Section 2.2) before making its decision.

Legal requirements in respect of Environmental Impact Assessment are contained within the Planning Act and these are described in more detail in Section 4. Similar legal requirements in respect of Appropriate Assessment are also set out in the Planning Act and these are summarised in Section 2.2 below.

Irish Water has entered into pre-application discussions with An Bord Pleanála under Section 37B of the Act to determine whether the revised project for Ringsend will be classified as SID. A decision is expected in due course. As noted above, if the revised project is deemed SID, its planning application will be made directly to An Bord Pleanála.

2.2 Appropriate Assessment and Natura Impact Statement

The Birds and Habitats Directives of the European Union (EU) set out various procedures and obligations including the establishment of Special Protection Areas (SPA) and Special Area of Conservation (SAC) for the protection of specific habitats and species. Collectively, the SPAs and SACs established throughout the EU comprise a network known as Natura 2000. The Habitats Directive imposes a duty on Member States to consider the possible nature conservation implications of any project on the Natura 2000 site network before any decision is made to allow that project to proceed. These requirements have been included in the Planning and Development Act, 2000 as amended (see Section 2.1 above).

This assessment procedure is known as Appropriate Assessment and is quite similar to the EIA procedure. It is normally undertaken at planning consent stage by An Bord Pleanála. Like the EIA procedure, a document is prepared by the project proposer and submitted with its application for project consent. This document is known as a Natura Impact Statement (NIS). While there is significant overlap between the EIA and AA processes, it should be noted that the NIS and AA only consider and assess impacts on the Natura 2000 network and that AA is a separate legal consent process distinct from EIA.

Unlike an EIS, the content of a Natura Impact Statement is not set out in legislation. Accordingly, and given the significant overlap in content, for the purposes of this scoping exercise only, issues affecting the Natura 2000 network will be considered in parallel with the EIS issues in Sections 5 and 6.

2.3 Planning Policy Context

In terms of planning policy context, the following section provides a brief overview of relevant policy and planning history in this regard.

2.3.1 The National Development Plan 2007-2013 and National Spatial Strategy 2002-2020

The National Development Plan (NDP) and the National Spatial Strategy (NSS) set out the overarching strategic planning framework, taking into account population growth and changes to the economy and society.

Section 3.2 of the NSS states *“Dublin as the capital city plays a vital national role. But it needs effective strategic planning and better management of the strong development pressures within it to secure and consolidate that role for the future”*.

Section 3.3.1B of the NSS states that *“With further improvements to its amenities and quality of life attractions, Dublin can maintain and improve its European and world competitiveness in attracting investment and encouraging people to live in the city area itself”*.

Furthermore, that the continued health of Dublin is critically dependent on: *“Efficient and cost effective water services and waste management infrastructure”*.

2.3.2 Regional Planning Guidelines for the Great Dublin Region 2010-2022

The Regional Planning Guidelines refer to the Strategic Environmental Assessment (SEA) completed for the GDSDS, with Section 6.5 outlining that water treatment and management has seen large-scale investment across the GDA since 2004, and in line with the findings of the GDSDS *“decision were taken to make significant investment to expand a number of waste water treatment plants across the GDA,*

to ensure that adequate capacity was available in the short and medium term to meet the high levels of growth and environmental standards on this key service”.

It also noted that the GDA is a mix of one major facility (at Ringsend) serving an area mostly comprised of the metropolitan area, and a range of other facilities at a large scale serving a number of towns (such as Osberstown) and smaller facilities serving towns across the Regions (e.g. Balbriggan/Skerries, Dunshaughlin).

“In many locations the scale of investment in new facilities has only just kept pace with the levels of growth experienced, necessitating the need for the development of further facilities to meet the RPG Strategy. As a result, the need for investment in new treatment facilities to serve the GDA is both pressing and immediate as key existing facilities and networks are reaching capacity. Considering the complex issues and significant lead in times for new infrastructure the failure to move forward on this issue in the immediate future will severely curtail the ability of Authorities to deliver the RPGs for the GDA and by consequence the NSS’.

Section 6.5.1 ‘Strategic Policy and Recommendations – Waste Water Strategic Policy’ includes Table 11: Critical Strategic Projects for Wastewater and Surface Water; with Item 1 listed as ‘Expansion of the Ringsend Waste Water Treatment Plant to ultimate capacity’.

2.3.3 Dublin City Development Plan 2011-2017

The Ringsend WwTP site is zoned Z7: ‘To provide for the protection and creation of industrial uses and to facilitate opportunities for employment creation’. ‘Public Service Installations’ are an acceptable use within this zoning designation.

Relevant planning policy considerations contained within the Dublin City Development Plan include:

SI 43 To ensure the upgrading of wastewater infrastructure and to facilitate the provision and safeguarding of infrastructure corridors required to facilitate sustainable development in the city and region.

SI44 To support the development of the Greater Dublin Regional Wastewater Treatment Plant, Marine Outfall and Orbital Sewer to be located in the northern part of the Greater Dublin Area to serve the Dublin Region as part of the Greater Dublin Strategic Drainage Strategy.

SI 45 To provide additional and improved wastewater treatment capacity by the upgrading of the Ringsend Waste Water Treatment Plant.

SI46 In co-operation with the other local authorities to implement the recommendations, as appropriate, of the Greater Dublin Strategic Drainage Strategy, subject to funding being available.

GC24 To seek the continued improvement of water quality, bathing facilities and other recreational opportunities in the coastal, estuarine and surface waters in the city and to protect the ecology and wildlife of Dublin Bay.

It is an objective of Dublin City Council:

SI075 In cooperation with other Local Authorities in the Region to implement appropriate Development Management policies to prevent overloading of the wastewater infrastructure and the consequent risk of pollution of natural waterbodies”.

2.3.4 Dublin City Development Plan 2016-2022

Dublin City Council has commenced the preparation of a new City Development Plan 2016 – 2022. In 2014 Dublin City Council prepared a Pre-Draft of the Development Plan which was then amended based on the observations made by citizens, communities, businesses and other organisations. The Draft Plan was put on public display from 1st October – 11th December 2015 and Dublin City Council is currently reviewing the submissions made during this period. Publication of the Dublin City Development Plan 2016-2022 is scheduled for November 2016.

2.3.5 The Greater Dublin Strategic Drainage Study

The Greater Dublin Strategic Drainage Study and its objectives are set out in Section 1.3 of this report.

2.3.6 Eastern River District Basin Management Plan 2009-2015

Under the ERBD Management Plan the Liffey Estuary has been designated as ‘moderate status’ with the objective of reaching ‘good status’ by 2027. Preparation has begun of the 2nd round of River Basin Management Plans which are intended to be in place by 2017.

2.3.7 Other Policy Considerations

- National Wastewater Sludge Management Plan;
- New Regional Planning Guidelines;
- New Dublin City Development Plan;
- Urban Wastewater Treatment Regulations;
- Irish Water Services Strategic Plan;
- Irish Water Sludge Strategy document; and
- Dublin City Biodiversity Action Plan 2015-2020.

2.4 Water Framework Directive

In response to the increasing threat of pollution and the increasing demand from the public for cleaner rivers, lakes and beaches, the EU adopted the Water Framework Directive (WFD), 2000/60/EC. This Directive is unique in that, for the first time, it establishes a framework for the protection of all waters including rivers, lakes, estuaries, coastal waters and groundwater, and their dependent wildlife/habitats under one piece of environmental legislation. The WFD aims to:

- protect/enhance all waters (surface, ground and coastal waters);
- achieve "good status" for all waters by December 2015;
- manage water bodies based on river basins or catchments; and
- involve the public in this process.

The Water Framework Directive is linked to, and cross-references, a number of other EU directives in several ways. These include Directives relating to the protection of biodiversity (Birds and Habitats Directives), directives related to specific uses of waters (drinking water, bathing waters and urban waste water directives) and to directives concerned with the regulation of activities undertaken in the environment (Industrial Emissions and Environmental Impact Assessment directives). More recent directives on topics such as Floods and the Marine Strategy Framework have significant linkages with the WFD which is also supplemented by the Priority Substances Directive and the Groundwater Directive. The Nitrates Directive forms an integral part of the Water Framework Directive and is one of the key instruments in the protection of waters against agricultural pressures. The Sustainable Use of Pesticides and the Sewage Sludge Directives also provide for the control of materials applied to land.

The European Communities Environmental Objectives (Surface Waters) Regulations 2009, (S.I. No. 272 of 2009) are of particular interest as they implement further aspects of the WFD, in particular Directive 2008/105/EC on environmental quality standards in the field of water policy and Directive 2006/11/EC on pollution caused by certain dangerous substances discharged into the aquatic environment. The Regulations apply to all surface waters and provide, inter alia, for:

- The establishment of legally binding quality objectives for all surface waters and environmental quality standards for pollutants;
- The examination and, where appropriate, review of existing discharge authorisations by Public Authorities to ensure that the emission limits laid down in authorisations support compliance with the new water quality objectives/standards;
- The classification of surface water bodies by the EPA for the purposes of the Water Framework Directive;
- The establishment of inventories of priority substances by the EPA; and
- The drawing up of pollution reduction plans to reduce pollution by priority substances and to cease and/or phase out discharges, emissions or losses of priority hazardous substances.

Under the Water Framework Directive surface waters are classified as either inland, transitional, or coastal. Inland waters are almost essentially fresh waters, rivers, lakes, canals, etc. Coastal waters comprise the sea, approximately 1 nautical mile from the shore. Transitional waters are bodies of water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows, e.g. estuaries. The categorisation of waters in Dublin Bay under the WFD is shown in Figure 2-1 and in Drawing No.8. The categorisation of waters is of significance in terms of the water quality standards which apply to them (see Section 5.2 for further information).

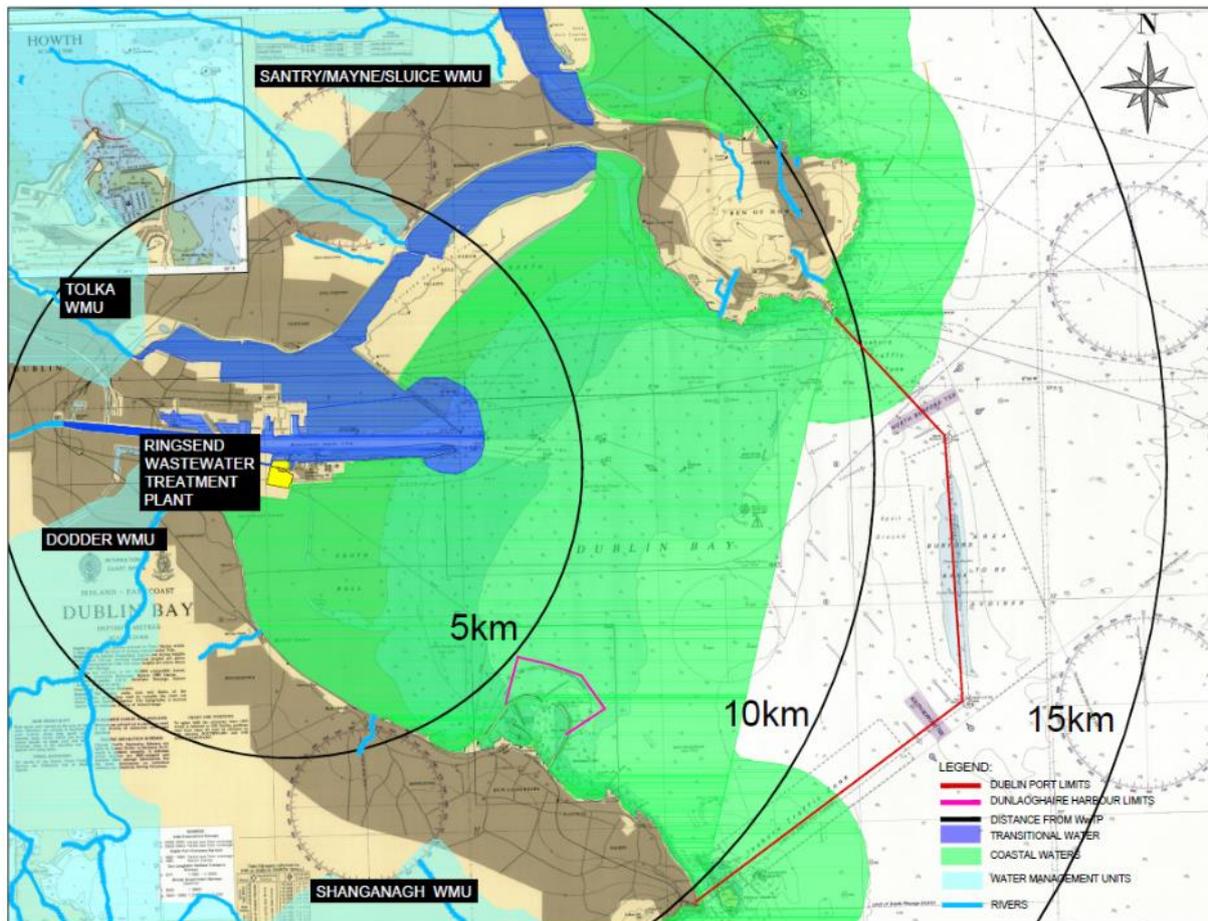


Figure 2-1 - Dublin Bay Waters as Categorised under Water Framework Directive

2.5 Wastewater Discharge Authorisation

A system for the licensing of waste water discharges from areas served by public sewer networks was brought into effect by the 'Waste Water Discharge (Authorisation) Regulations, 2007' (S.I. No. 684 of 2007). The discharge licensing process system gives effect to a number of EU Directives by the imposition of restrictions or prohibitions on the discharge of dangerous substances, and thus preventing or reducing the pollution of waters by waste water discharges. All discharges to the aquatic environment from sewerage systems owned, managed and operated by Irish Water require a waste water discharge licence or certificate of authorisation from the EPA.

The authorisation process provides for the Agency to place stringent conditions on the operation of such discharges to ensure that potential effects on the receiving water bodies are strictly limited and controlled. In deciding on these conditions, the EPA is required to implement a 'combined approach' whereby a discharge's emission limits must be based on the stricter of either (or both) the Urban Waste Water Treatment Directive and the Water Framework Directive. The Greater Dublin Area Agglomeration (i.e. the Ringsend WwTP and its catchment) received its current licence from the EPA in July 2010 (EPA Ref: D0034-01). It's important to note that the licence covers all of the discharges within the entire Ringsend catchment - including storm overflows and emergency discharges, e.g. from pumping stations, of which there are many - and not just the discharges from the treatment plant itself.

Discharge licences must be reviewed at least every six years, or earlier, when significant changes are proposed to the licenced discharges, e.g. emission levels, frequency, or location. Accordingly, in addition to planning consent from An Bord Pleanála an application to review the licence for the Greater Dublin Area agglomeration will be required before associated changes to the treatment plant’s discharge can come into effect. Irish Water proposes to submit an application for the review of the Ringsend licence in late 2017 after a decision has been made on whether or not to approve the revised project. A memorandum of understanding between An Bord Pleanála and the EPA addresses consultation between these bodies during the consideration of planning applications (and the undertaking of EIA and AA) in respect of wastewater treatment plants.

2.6 EIA Amending Directive (2014/52/EU)

On 14th April 2014, the above Directive was adopted which amends Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. Article 2 of this directive requires Member States to bring it into force by 16th May 2017. Directive 2014/52/EU generally clarifies aspects of the EIA Directive to bring it in line with ECJ Judgements and introduces some additional provisions and procedural options. Accordingly, compliance with the amending directive will automatically ensure compliance with Directive 2011/92/EU. On that basis it is proposed to prepare the EIS for the revised project in accordance with Directive 2011/92/EU as amended by Directive 2014/52/EU.

2.7 Summary of approvals and proposals for Ringsend WwTP

The following table represents a summary of the plant’s planning history since commissioning in 2003.

	Existing plant commissioned in 2003	Development ‘as consented’ in 2012 (SID Ref: 29N.YA0010)	Revised Project (the subject of this Scoping Consultation)
Treatment Process/Quality of final effluent	Secondary treatment with nitrification to reduce ammonia (NH ₄). Disinfection during the bathing water season.	Carbonaceous secondary treatment discharge without reduction in N or P. No disinfection.	Advanced secondary treatment discharge, with reduction in N and P. Disinfection during the bathing water season.
Location of discharge point	ESB Poolbeg cooling water channel prior to discharge to Lower Liffey Estuary	Long Sea Outfall Tunnel c. 9km to the east of the Treatment works	ESB Poolbeg cooling water channel prior to discharge to Lower Liffey Estuary
Capacity	1.64m PE (installed)	2.4m PE ‘installed’ capacity equivalent to 2.1m PE ‘firm’ capacity	2.4m PE ‘installed’ capacity equivalent to 2.1m PE ‘firm’ capacity
Flow to Full Treatment	5.7 m ³ /s, Average Flow 11.1 m ³ /s, Peak Flow	6.9 m ³ /s, Average Flow 13.8 m ³ /s, Peak Flow	6.9 m ³ /s, Average Flow 13.8 m ³ /s, Peak Flow

Section 3: Study Area

3.1 Site Location

The Ringsend WwTP is located on the Poolbeg peninsula in Dublin City, with a final effluent discharge into the River Liffey Estuary c. 1km to the east, adjacent to the ESB Poolbeg Power Station (see Figure 3-1). The Poolbeg peninsula is located along the southern bank of the River Liffey, at its eastern extremity, where the river enters Dublin Bay. The surrounding environment consists of Dublin City to the west, which is an urbanised landscape, and Dublin Bay to the east, which has a number of environmental designations, and is also an important recreational environment – refer to section 5.2 and 5.3 for further detail.



Figure 3-1 - Ringsend WwTP Site Location and Surrounding Areas

3.2 Dublin Bay – General Description

The River Liffey enters Dublin Bay between Clontarf and Ringsend in the channel formed by the North Bull Wall and the Great South Wall as shown in Figure 3-1. The North Bull Wall is a natural bank reinforced by a stone embankment that is only inundated at half tide. It therefore holds back the water flowing out of the harbour at and after half ebb. The navigation channel of Dublin Port runs close to the South Wall and extends from the Port area through the mouth of the harbour. Dublin Bay is a small, shallow sandy embayment. It is enclosed by two headlands Howth to the north and Dalkey to the south. It is approximately 10 kilometres across the mouth of the bay and narrows to the mouth of the River Liffey.

The intertidal zone of the bay occupies the inner third of the bay. The bay slopes gently reaching depths of 20m at the mouth of the Bay. The water depth decreases towards the harbour with depths of less than 5m occurring in the inner half of the bay. The Burford Bank sits centrally across the mouth of

Dublin Bay. The Burford Bank is a linear sand ridge about 5km in length, which rises to within 5m of the surface. The North Bull Island is a prominent physical feature in the bay which developed due to sedimentation accumulation after the construction of the North Bull wall in 1821. To the north of the channel are extensive areas which dry out at low water. These mudflats extend from the mouth of the River Tolka almost to the end of the Bull Wall and north eastwards past the Bull Island Causeway to Sutton Creek, which is a narrow channel between Bull Island and Howth.

3.3 Surrounding Environment

3.3.1 Poolbeg Peninsula and Dublin Docklands

The Poolbeg peninsula is a heavily industrialised environment and is occupied by a number of upper and lower tier Seveso Sites (including the Dublin Waste to Energy Site).

The area beyond the immediate peninsula is largely residential to the south, commercial / residential to the west, and industrialised to the north, where most of the Dublin Port Company estate is located. The area on either side of the river is known as the Dublin Docklands.

The Draft Dublin City Development Plan 2016 to 2022 proposes that areas of the Dublin Docklands, which includes the Poolbeg peninsula, will be designated as a Strategic Development and Regeneration Area.

3.3.2 Dublin Port

Dublin Port is the largest port on the island of Ireland handling almost 33m tonnes of cargo/freight in 2015. It is also an extremely important international gateway to Ireland with 1.8m passengers and 0.5m vehicles passing in and out of the port in 2015. The port has direct connections through the Dublin Port Tunnel to the M50 and beyond to the national motorway network, in addition to national rail network connections. The Dublin Port Estate comprises an area of c. 260 hectares spanning both the North and South banks of the River Liffey, with most of the estate (215 ha) lying to the north of the river. In 2015, Dublin Port received planning approval to proceed with a major development of the port (Alexandra Basin Redevelopment Project). The project involves:

- Works at Alexandra Basin West including construction of new quays and jetties, remediation of contamination on the bed of the basin, and capital dredging to deepen the basin;
- Infilling of the Basin at Berths 52 and 53 and construction of a new river berth with a double tiered Ro-Ro ramp; and
- Deepening of the navigation channel and approach to Dublin Port by 2.2m from -7.8m CD to -10.0m CD. This operation will result in 9.7m tonnes of material being dredged. Dublin Port has applied to the EPA for a Dumping at Sea Permit under the 'Dumping at Sea Acts, 1996 to 2009, to dispose of this material at the Burford Bank dredgings disposal site in Dublin Bay.

3.3.3 Recreational Facilities and Amenities

Dublin Bay is a high amenity area with a number of scenic views, walkways, natural interest areas and beaches. Throughout the year, significant numbers of people use the amenity of the bay, particularly at Howth Head, Bull Island, Clontarf, Poolbeg, Sandymount, Dun Laoghaire and Seapoint refer to Figure 3-1 and Figure 3-2 and Drawing No.7 in the Appendix A. Popular water based activities in Dublin Bay include sailing, angling, swimming, rowing and water sports such as scuba diving, wind surfing, kite surfing and sea kayaking.



Figure 3-2 - Recreational and Bathing Areas in Dublin Bay South

3.3.4 Bathing Water Beaches

There are four bathing waters in Dublin Bay designated under EU Directive 2006/7/EC (and Bathing Water Quality Regulations, SI No 79 of 2008). Three of these waters fall within the Dublin City Council area (Dollymount, Sandymount and Merrion Strands) and one in the Dun Laoighaire-Rathdown Council area (Seapoint) – See Drawing No 7 in Appendix A. All are monitored by the local authorities during the bathing water season in accordance with the regulations. Dublin City Council also undertake monitoring at the Shelley Banks beach, the South Bull Wall at the Half Moon Swimming Club, as well as the North Bull Wall, near Dollymount Strand. In 2014 the designated bathing waters were classified as follows:

Table 3-1 - Bathing Water Classification

Bathing Water	2014 Classification
Dollymount	Good
Sandymount	Good
Merrion	Sufficient
Seapoint	Excellent

3.3.5 River Liffey and Other Rivers

There are a number of rivers discharging into Dublin Bay, which are grouped according to water management units, for the purposes of the Water Framework Directive. These groupings are useful for the purposes of this study area overview and are labelled as follows:

- Cammock;
- Dodder;

- Liffey;
- Tolka; and
- Santry Mayne Sluice.

There are also a number of smaller rivers and local streams discharging at various points around the bay coastline, e.g. Naniken, Wad. In addition, the two canals, Royal and Grand, discharge to the River Liffey at Spencer Dock and Grand Canal Docks respectively.

The Ringsend WwTP discharges to the Lower Liffey Estuary, which also incorporates the flows from the Cammock and Dodder river groups, as well as numerous smaller tributaries and streams, e.g. Poddle and Bradogue. The River Tolka and its tributaries discharge into its own estuary, located between the north side of Dublin Port and the Clontarf waterfront, and adjacent to the Liffey estuary.

The discharge from the River Liffey is the main freshwater input to the bay, with the Rivers Dodder and the Tolka the next major contributors of freshwater flows to the estuary.

The River Santry, which is part of the Santry Mayne Sluice water management unit, discharges adjacent to the North Bull Island causeway.

The river bodies typically exhibit signs of pollution along their lower reaches, where they pass through the more intensively developed areas and a programme of measures is being pursued, under the Water Framework Directive, to improve their water quality to Good Status.

3.4 Conservation Designations

3.4.1 Introduction

The surrounding environment includes areas formally designated for nature conservation, which are listed here and will be further examined for scoping purposes in later sections.

The conservation designations include both areas protected under European legislation, National legislation and local planning objectives.

The conservation designations assist the scoping process by identifying areas and features, which may be vulnerable to impact by the project.

3.4.2 European Legislation

European Legislation provides, through the Habitats and Birds Directives, for a framework of designated sites, to be protected from a conservation perspective. These sites are collectively described as Natura 2000 sites and consist of:

- Special Areas of Conservation (SAC), including candidate areas (cSAC), which are concerned with the protection of habitats and associated species; and
- Special Protection Areas, which are concerned with the protection of birds.

Special Areas of Conservation

The candidate Special Areas of Conservation within Dublin Bay are as follows:

- South Dublin Bay cSAC (000210);
- North Dublin Bay cSAC (000206);

- Howth Head cSAC (000202); and
- Rockabill to Dalkey Island cSAC (003000).

The extent of each area is shown in Figure 3-3 and again in Drawing No.4 in Appendix A of this report.

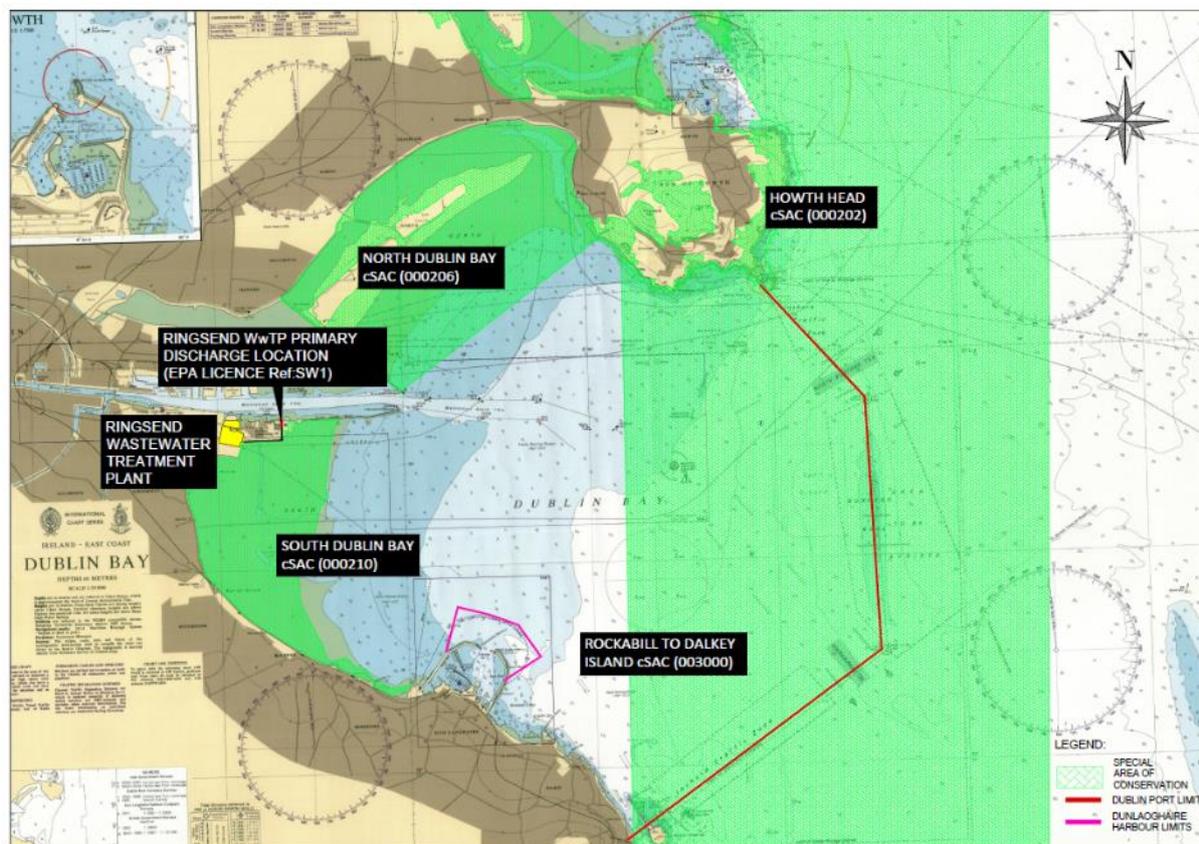


Figure 3-3 - Special Areas of Conservation

Special Protection Areas

The Special Protection Areas within Dublin Bay are as follows:

- South Dublin Bay and River Tolka Estuary SPA (site code 004024);
- North Bull Island SPA (004006);
- Howth Head Coast SPA (004113); and
- Dalkey Islands SPA (004172).

The extent of each area is shown in Figure 3-4 and again in Drawing No.5 in Appendix A of this report.

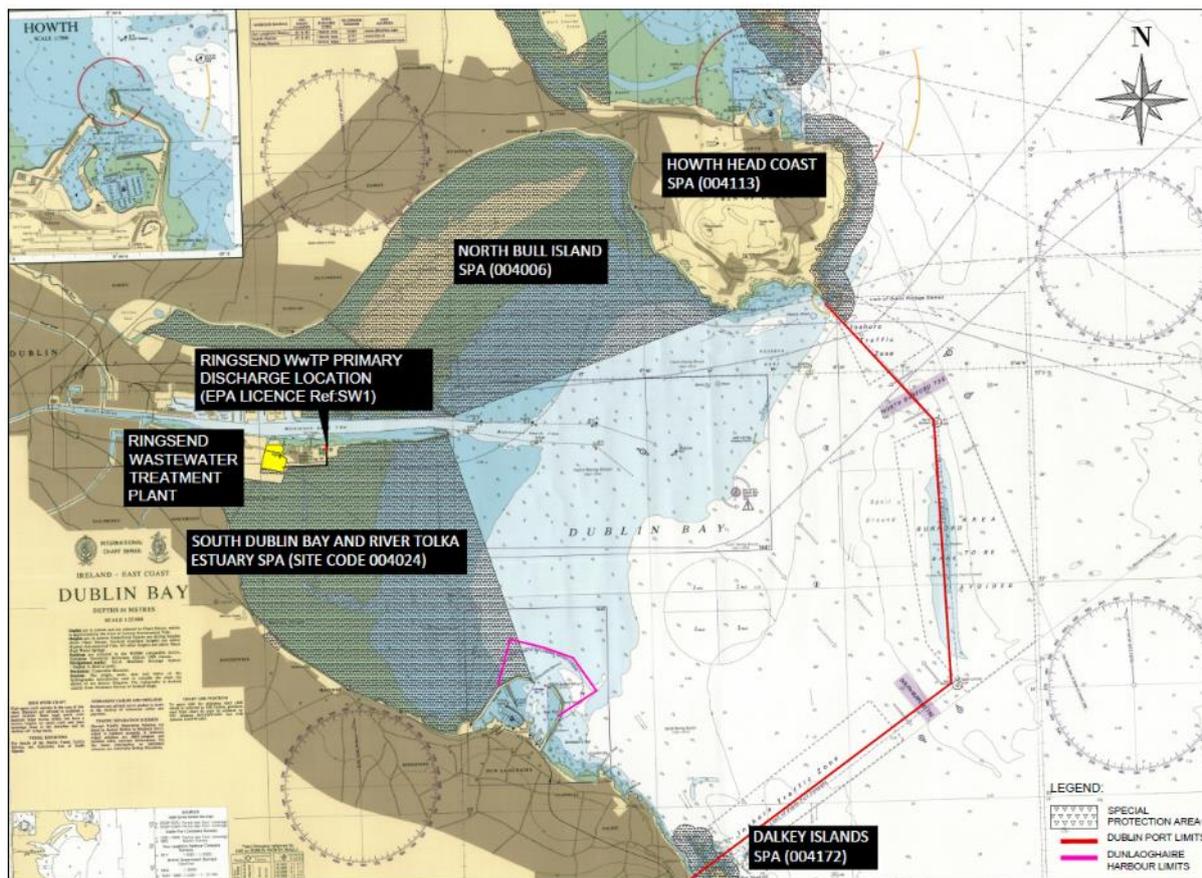


Figure 3-4 - Special Protection Areas

3.4.3 National Legislation

National Legislation provides, through the Wildlife Acts, for the designation of areas for the purposes of nature conservation. These areas are described as Natural Heritage Areas (NHA), or proposed Natural Heritage Areas (pNHA). The Natural Heritage Areas within the surrounding environment are as follows and are also shown in Figure 3-5 and again in Drawing No. 6 in Appendix A:

- South Dublin Bay pNHA (000210);
- North Dublin Bay (000206);
- Howth Head pNHA (000202);
- Grand Canal pNHA (002104); and
- Royal Canal (002103).

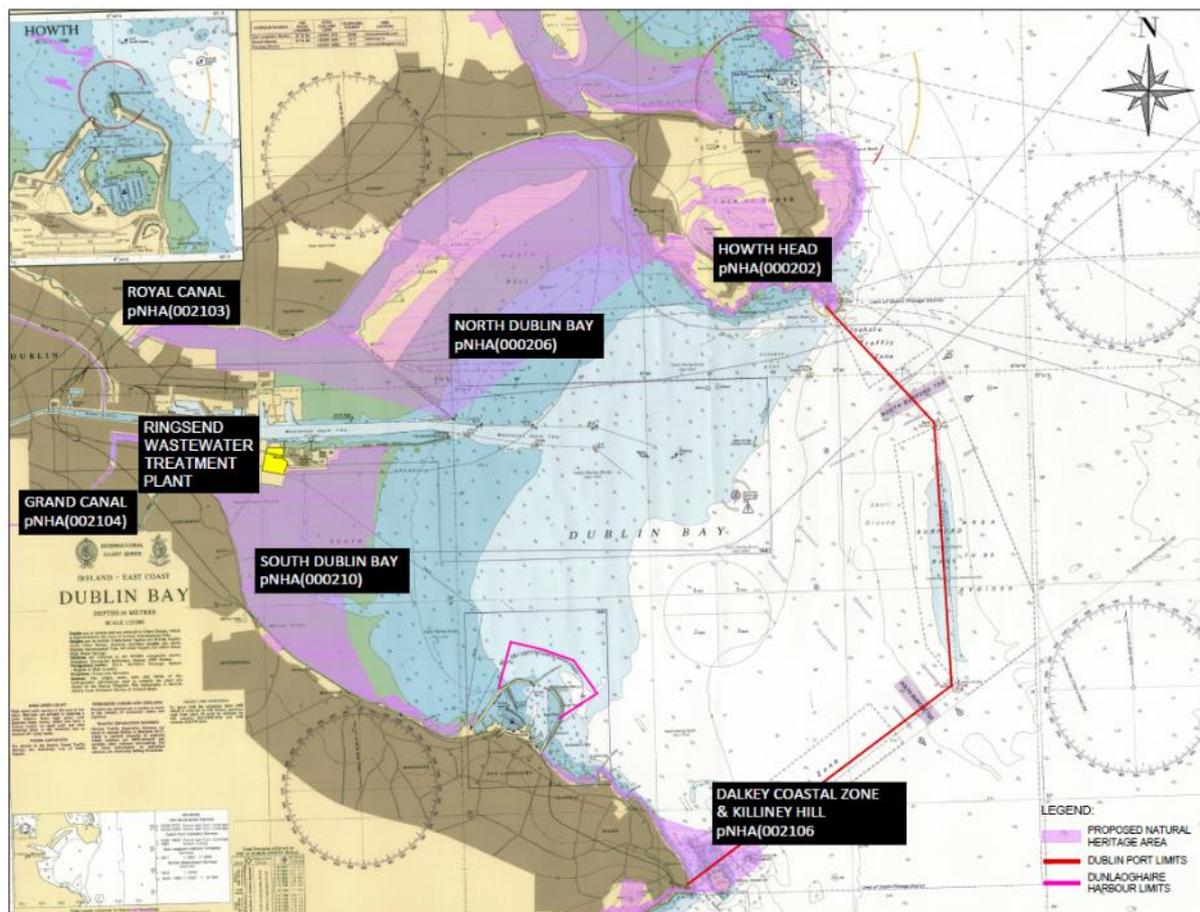


Figure 3-5 - Proposed Natural Heritage Areas

3.4.4 Dublin Bay Biosphere

In 1981, UNESCO recognised the importance of Dublin Bay for conservation by designating the North Bull Island as a Biosphere on account of its rare and internationally important habitats and species of wildlife. The North Bull Island supports a variety of plants and wildlife including an internationally significant population of Brent geese that overwinters in the bay. To support sustainable development, UNESCO’s concept of a Biosphere has evolved to include not just areas of ecological value but also the areas around them and the communities that live and work within these areas.

As a consequence, the North Bull Island Biosphere was expanded in 2015 to now cover the whole of Dublin Bay, reflecting its significant environmental, economic, cultural and tourism importance – refer to Figure 3-6 and in Drawing No. 10 in Appendix A. The new Dublin Bay Biosphere Reserve extends to over 300 km² of marine and terrestrial habitat encompassing North Bull Island and ecologically significant habitats such as the Tolka and Baldoyle Estuaries, Howth Head, Dalkey Island, Killiney Hill and Booterstown Marsh. Over 300,000 people live within the newly enlarged Biosphere.

The main objective of a biosphere reserve is to achieve the following three interconnected functions of:

- Conservation: protecting cultural diversity and biodiversity, including genetic variation, species, ecosystems and landscapes and securing services provided by such diversity;
- Development: fostering economic and human development that is environmentally and socially sustainable and culturally appropriate; and

- Logistic support: facilitating demonstration projects, environmental education and sustainable development education and training, research, and monitoring.

Biosphere reserves aim to achieve integrated management of land, fresh and marine waters and living resources by integrating conservation into development/land-use through appropriate zoning. The purpose of the zoning is to ensure that the biosphere effectively combines conservation, sustainable use of resources, and knowledge generation based on collaborative management. Three different zones are used which are managed in different ways:

1. Core Protected Zone – in the Dublin Bay Biosphere this zone comprises 50 km² of areas of high natural value. Key areas include the Tolka and Baldoyle Estuaries, Booterstown Marsh, Howth Head, North Bull Island, Dalkey Island and Ireland’s Eye;
2. Buffer Zone - 82 km² of public and private green spaces such as parks, greenbelts and golf courses, which surround and adjoin the core zone; and
3. Transition Zone - 173 km² forming the outer part of the Biosphere. It includes residential areas, harbours, ports and industrial and commercial areas.

While the Biosphere designation does not strictly add any specific new legal protection, it greatly enhances the many legal protections that already exist by improving the coordination and management of the three functions in a holistic and integrated way.

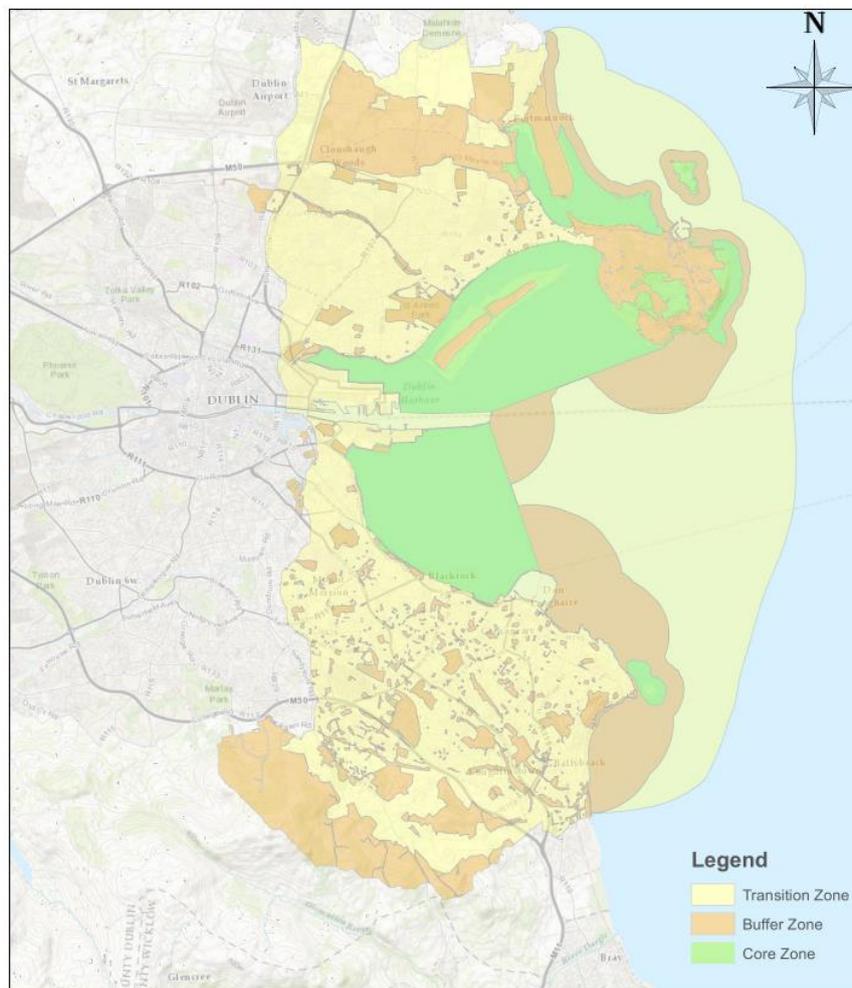


Figure 3-6 - Dublin Bay Biosphere

Section 4: Consultation and the EIA Process

4.1 Introduction

Environmental Impact Assessment (EIA) is the process of identifying, predicting, evaluating and mitigating the anticipated effects on the environment of a project before a decision is made whether or not to proceed with that project. The steps in the EIA process are set out in national and EU legislation. Most large scale infrastructure projects, e.g. motorways and wastewater treatment plants, must be subject to EIA as part of their planning consent process. Whether EIA applies to any specific project depends not only on the project's scale but also on the sensitivity of the receiving environment. Projects are generally 'screened', early in their development, to determine whether or not a requirement for EIA applies. Infrastructure projects, where EIA is required, usually fall under the provisions of the Strategic Infrastructure Development (SID) Act where the decision-making body is An Bord Pleanála (See Section 2.1).

The Environmental Impact Statement (EIS) is the document prepared by the proposer of a project setting out the effects (if any - both positive and negative) which the proposed development, if carried out, would have on the environment. Normally, the first step in the preparation of an EIS is a 'scoping' study. During this stage the project proposer consults with statutory bodies, interested parties and in many cases the general public. The objective of the scoping exercise is to identify the environmental issues of concern which might arise during the construction and operation of the project and which need to be addressed in the EIS. The scoping and preparation of an EIS are ongoing processes that ideally take place in parallel with the project design. This then provides the best opportunity for considering design alternatives (where available) and for implementing measures to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

The EIS document will be prepared in accordance with *Revised Guidelines on the Information to be contained in Environmental Impact Statements Draft September 2015* published by the Environmental Protection Agency.

Figure 4-1 details the steps involved in the overall EIA process. The Ringsend WWTP Upgrade Project is currently at Step 2 – Scoping.

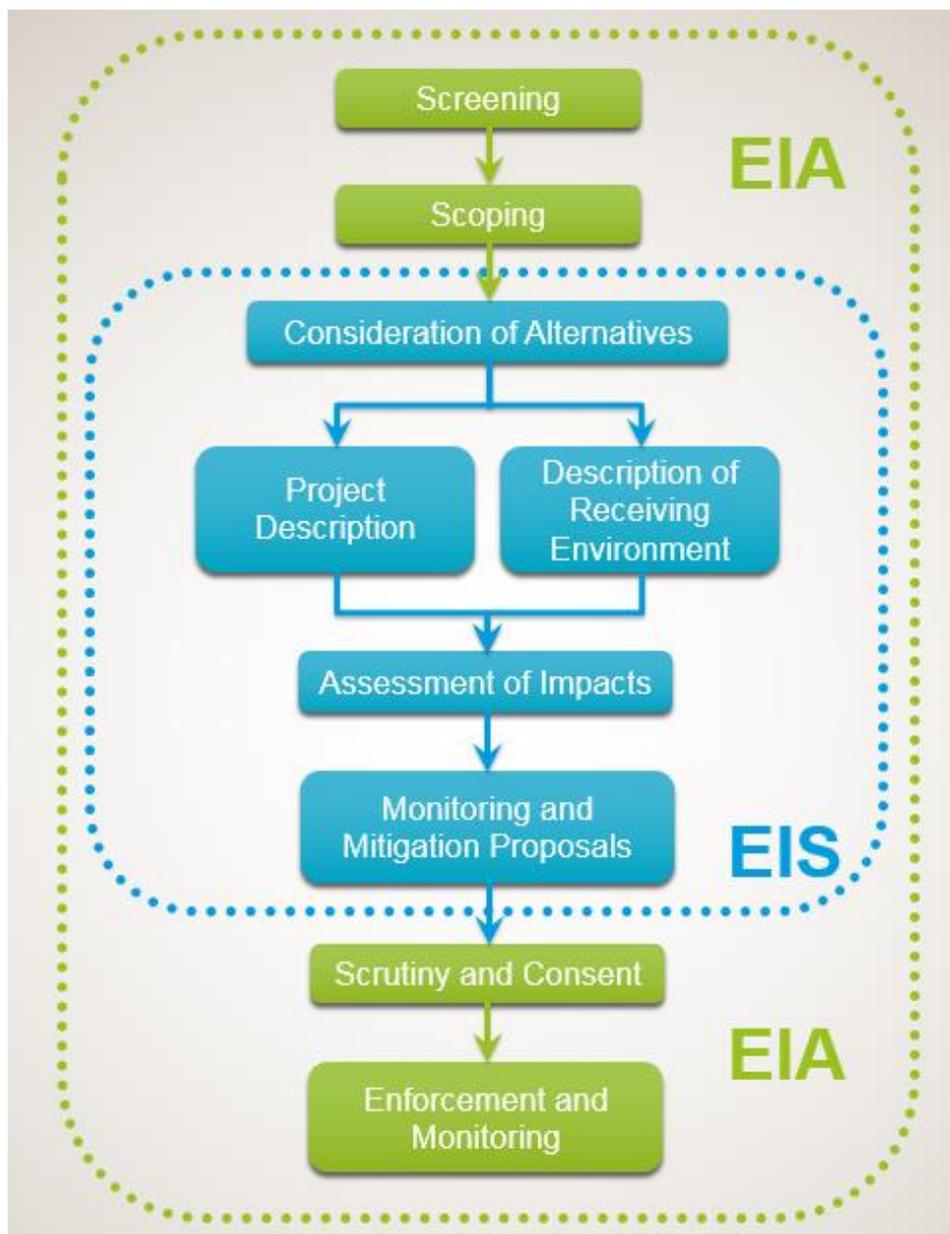


Figure 4-1 - Environmental Impact Assessment Process

4.2 Screening

In 1997 an EIA was undertaken by the then Minister of the Environment relating to the provision of a 1.64m PE WwTP discharging to the Lower Liffey Estuary, i.e. the current WwTP prior to the making of the 2012 SID application by Dublin City Council.

In 2008, on foot of a screening request from Dublin City Council, An Bord Pleanála determined (Ref: 29S.YD0001) that an increase in capacity of the order of magnitude proposed in the 2012 SID Application (i.e. from 1.64m PE to 2.4m PE) required EIA before development consent could be given. This determination was prior to any proposal by Dublin City Council to relocate the primary discharge location of the WwTP to Dublin Bay via the 9km long sea outfall tunnel.

In 2012, both EIA and AA of a 2.4m PE capacity (2.1m PE ‘firm’ capacity) WwTP discharging at a point c. 9km to the east in Dublin Bay was undertaken by An Bord Pleanála prior to making its decision to approve this project (ABP Ref: 29N.YA0010).

The outcome of this ‘screening’ exercise is that Irish Water has concluded that no EIA (or AA) has been undertaken of a 2.4m PE (2.1m PE ‘firm’) capacity WwTP discharging at the current location on the Lower Liffey Estuary. Consequently, Irish Water has concluded that the Revised Project must be the subject of a new project-specific EIA before a decision on development consent may be made.

(Note - for similar reasons Irish Water considers that the Revised Project must also be the subject of a new project-specific AA before a decision on development consent may be made.)

4.3 Scoping

The scoping study is a key element of the EIA process and signifies commencement of the development of an EIS. ‘Scoping’ is a process of deciding what information should be contained in an EIS and what methods should be used to gather and assess that information. It is defined in the EC Guidance as:

“determining the content and extent of the matters which should be covered in the environmental information to be submitted in the EIS”

As an early stage tool scoping will provide relevant information on the following issues which will need to be addressed in the preparation of the EIS:

- Likely significant impacts of the project, its construction and operation;
- Scope of the study required for each of EIS topic;
- Data and information available and additional surveys and investigations required;
- Methods and criteria to be used in predicting and evaluating impacts;
- Alternatives and mitigation measures to be considered as part of the project;
- Content, structure, and format of the Environmental Impact Statement;
- Legal requirements; and any additional
- Consultation requirements.

Scoping ensures that potential environmental impacts are identified at an early stage in the design process, thereby minimising the need for subsequent design amendments and that environmental protection and sustainability are key factors in the project design. It is not the purpose of this Scoping Document to undertake detailed measurement, calculation or assessment of likely impacts. The assessment and mitigation of impacts will be carried out by the competent experts and the project team during the parallel process of designing the development and preparing the EIS. It should be noted that scoping does not end when the current Scoping Stage is complete but is a continuing ongoing activity, particularly when new issues or information emerges.

4.4 Consultation Process

With the publication of this scoping document, Irish Water is commencing a consultation period with the general public, interested parties and prescribed bodies. There can be considerable benefits in such early consultation in relation to the scope of an EIS. Early consultation can greatly help in the identification of significant issues so that these issues can be considered at the earliest possible opportunity. The publication of the Scoping Document to the general public and prescribed bodies

signifies the commencement of the Non-Statutory and Public Consultation period. The duration of the consultation period is 8 weeks.

4.5 Engagement

As part of the consultation period on this scoping document Irish Water are requesting project feedback through submissions on this Scoping Document, proposed Study Area, and methodologies to be used in assessing potential environmental impacts.

4.5.1 Prescribed Bodies

As part of the consultation Irish Water will be writing to prescribed bodies and providing them with a copy of this Scoping Document. Prescribed Bodies are statutory and non-statutory bodies whom applicants are obliged to notify under the Planning and Development Regulations at the time of submitting an application for a proposed project. These prescribed bodies will also be invited during the consultation period to make a submission on whether any further issues or methodologies should be taken into account in the preparation of the EIS. The following non exhaustive list of prescribed bodies will be included in the consultation process:

Table 4-1 - Prescribed Bodies

Minister for Transport, Tourism and Sport	National Transport Authority
Minister for Communications, Energy and Natural Resources	Eastern and Midlands Regional Authority
Health Service Executive	Planning Authority - South Dublin County Council
Minister for Agriculture, Food and the Marine	National Roads Authority (now Transport Infrastructure Ireland)
Minister for the Environment, Community and Local Government	The Heritage Council
Minister for Arts, Heritage and the Gaeltacht	An Comhairle Ealaíon
Inland Fisheries Ireland	Failte Ireland
An Taisce	Planning Authority – Dublin City Council
Planning Authority - Meath County Council	Planning Authority - Dun Laoghaire Rathdown County Council
Planning Authority - Kildare County Council	Planning Authority - Fingal County Council

In addition, the following key stakeholders will also be specifically consulted (but not necessarily in their role as Prescribed Bodies):

Table 4-2 – Key Stakeholders

Minister for Jobs, Enterprise and Innovation	Commission for Energy Regulation
Health and Safety Authority	Dublin Port Company
Electricity Supply Board	Planning Department Electricity Supply Board
Environmental Protection Agency	Dun Laoghaire Harbour Company
Gas Networks Ireland	

4.5.2 General Public and Interested Parties

Irish Water plan to engage with the general public and interested parties through advertising in the national press and providing access to the project team at the open days. People will be encouraged to engage with the project team and learn about the proposed project and the contents of the Scoping Document. Irish Water is encouraging submissions on the Scoping Document.

During the consultation period open days will be held in Ringsend, Dun Laoghaire, Killiney, Clontarf and Sutton. This will allow the project team to interact with the general public. The project team will provide and discuss project details with all interested parties. Attendees will be able to ask questions and gain an understanding on what is proposed for the upgrade of Ringsend Wastewater Treatment Plant. Table 4-3 details the locations and dates for the open days.

Table 4-3 - Open Day Details

Location	Venue	Day, Date	Time
Sutton	Marine Hotel Sutton Cross, Dublin 13	Thursday, 21 st April	10am – 2pm
Clontarf	Clasaic Centre Alfie Byrne Rd, Dublin 3	Thursday, 21 st April	4pm – 7pm
Ringsend	SPORTSCO South Lotts Road, Ringsend	Saturday, 23 rd April	10am – 6pm
Killiney	Fitzpatrick Castle Hotel Killiney Hill Rd, Killiney	Tuesday, 26 th April	10am – 2pm
Dún Laoghaire	Royal Marine Hotel Marine Rd, Dún Laoghaire	Tuesday, 26 th April	4pm – 8pm

The submissions that are lodged during the Non-Statutory and Public Consultation period will be incorporated into a “Scoping Submissions Report” which will be compiled following completion of the consultation process. The Scoping Submissions Report will be then be made available on the Project Website (www.water.ie/ringsend) for public viewing and/or download.

Following the completion of the consultation and scoping period, the “competent experts” will prepare their individual sections of the EIS taking into consideration any further issues arising during the scoping and consultation period.

4.5.3 Making a submission

Irish Water is now inviting submissions from the public and interested parties on the issues and methodologies to be considered as part of the EIS and NIS development (see Section 5 of this document). The consultation period will run from 14 March 2016 through to 17 May 2016. Submissions received on the Scoping Document on or before 17 May will be considered as part of the EIS and NIS process.

For further information, or to make a submission, please:

Email: info@ringsendproject.ie

Phone: LoCall 1890 989 310 or + 353 (1) 453 7063. Project queries can be discussed, however, submissions can only be made in writing.

Post: Ringsend Project, PO Box 11561, Dublin 8

Visit: www.water.ie/ringsend Project details will be available on the website with an email link to info@ringsendproject.ie where written submissions can be made.

4.5.4 Questions to consider

As a starting point Irish Water is posing the following questions on the Scoping Document. Respondents can use these for direction or make their own submission on the Scoping Document.

1. Are there any environmental issues that should be considered in the preparation of the EIS that have not been included in the scoping document?
2. Are there any additional or alternative methodologies that should be used to assess environmental impacts?
3. Are there any other projects that should be considered in the EIS that may have cumulative (or 'in-combination') impacts with the Ringsend project?

4.6 Consideration of Alternatives

As detailed in the EIA Directive – Annex IV, Article 2 of Directive 2014/52/EU the main alternatives to the proposed development, considered by the developer, i.e. Irish Water, must be presented in the EIS. The following guidance is contained in the EIA Directive regarding the consideration of alternatives to be included in the EIS:

“A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.”

The presentation and consideration of the various reasonable alternatives investigated by the applicant is an important requirement of the EIA process. These indicate the main reasons for choosing the project that is being submitted for consent describing how environmental considerations were taken into account when selecting between those alternatives. In the context of Ringsend, it is important to note that the general objective of developing the WwTP to the ultimate capacity achievable within its site, was established as part of the GDSDS Final Strategy. These recommendations were the subject of a Strategic Environmental Assessment before being adopted into the policies of the various local and regional authorities. Accordingly, the alternatives to be considered and presented in the EIS are primarily those available for achieving the foregoing objective.

Alternatives can take various forms, all of which will be examined. At the highest level, alternatives may consider different technologies or discharge locations. At the more detailed level, alternatives tend to merge into mitigation measures where specific design options are taken, or construction methods adopted, to avoid, reduce or offset environmental impacts. A number of broad types of alternatives can be considered: “no action” option;

- “do nothing” option;
- alternative layouts;
- alternative designs;
- alternative discharge locations;
- alternative processes; and
- alternative mitigation measures.

Section 5: Proposed Scope of Environmental Impact Statement

5.1 Scoping of EIS

5.1.1 Introduction

The scoping of an Environmental Impact Statement (EIS) is concerned with identifying those aspects of the environment where there is an interaction, either direct or indirect, positive or negative, with the project and as a consequence there are LIKELY and SIGNIFICANT effects, which need to be assessed.

The aspects of the environment to be considered are as follows:

- Population & Human Health
- Biodiversity
- Land & Soils
- Water
- Air
- Climate
- Material Assets
- Cultural Heritage
- Landscape

In addition, the assessment must also consider:

- The interaction between the different environmental factors;
- The effects arising from the vulnerability of the project to risks of relevant major accidents or disasters; and
- Cumulative effects of this project in combination with other existing and proposed projects.

This section of the document considers each of the above environmental factors in turn and:

- Identifies the relevant receiving environment
- Makes an assessment as to whether there are likely and significant effects
- Identifies the data required and any necessary surveys
- Outlines how the project impact will be predicted and evaluated
- Identifies potential alternatives and mitigation measures if impacts arise

5.1.2 Comment on Previous Assessments

Unlike a new ('greenfield') development the Ringsend facility has been the subject of a number of previous planning and licence applications, the most recent being in 2012. Accordingly, the scoping and preparation of the EIS and NIS documents for the Revised Project is commencing from a position where a considerable amount of [relatively recent] data and survey information is already available.

As part of the scoping exercise, Irish Water will itself be undertaking a full review of the EIS and NIS prepared for the previous application (2012), the submissions received during that application's statutory consultation period, and the matters raised at its subsequent Oral Hearing and Judicial Review. Irish Water's review will seek to identify any gaps in data/information and areas where additional surveys/information is required. In addition, all appropriate mitigation measures proposed in the 2012 EIS, and the additional conditions attached to the consent by An Bord Pleanála will be included as measures in the revised development unless there are clear grounds for establishing that

they are no longer necessary. These points should be borne in mind when considering the remaining sections of this chapter.

5.2 Water

5.2.1 Receiving Environment - Scope

Water Quality is concerned with the impact of the project on receiving waters, whether:

- Groundwater;
- Surface waters;
- Estuarine waters; or
- Marine waters.

In assessing potential impacts areas to be considered have been identified as follows:

- Physical impacts;
- Chemical impacts;
- Biotic impacts (i.e. impacts on living organisms); and
- Impacts on beneficial uses.

This section identifies the receiving waters, which could be impacted.

5.2.2 Groundwater

Receiving Environment

Groundwater local to the site of the proposed development is heavily influenced by saline intrusion, with some chemical contamination.

The Geological Survey of Ireland does not identify the site as a groundwater source, and identifies the adjacent area as having low vulnerability, without being classified as an aquifer.

The Eastern River Basin District – River Basin Management Plan for 2009 to 2015, identifies the groundwater in Dublin City as having good status, with the objective of protecting that status.

Likely Significant Impacts

There is no abstraction from, or discharge to, the groundwater proposed during either the construction or operation stages of the proposed project.

The construction stage of the proposed project includes large excavations to a depth of 2 to 3 m and smaller excavations at depths of up to 5 m, additionally there will be piling of structures for structural support. As a consequence, the extent of any interaction with the ground water is comparable to general construction activities.

The operation phase of the project does not include any interaction with groundwater.

Data and Surveys

The existing data collected for the 2012 application will be updated, where possible and reviewed. No specific surveys for this project are proposed.

Assessment Methodology

The collected data will be reviewed against the detail of the proposed construction and operation activities and any likely significant impacts identified.

Mitigation Measures

Standard construction activities include the production of environmental management plans and the adoption of measures, including the bunding of any fuels or chemicals, to prevent spillages and indirect pollution of groundwater by percolation through the soil.

In addition, standard operating practices for wastewater treatment plants include the production of environmental management plans and the adoption of measures, including the bunding of any fuels or chemicals, to prevent spillages and indirect pollution of groundwater by percolation through the soil.

However, alternatives will be considered if likely and significant impacts are identified and mitigation measures identified in the event that suitable alternatives are not available.

5.2.3 Surface Waters (including Freshwater, Estuarine and Marine)

Receiving Environment

The local water environment can be most easily described by reference to the principle pieces of governing legislation, which comprise of the:

- Water Framework Directive; and
- Bathing Water Regulations.

The Water Framework Directive groups the local receiving waters under the Eastern River Basin District, as follows:

River Water Management Units

- Cammock;
- Dodder;
- Liffey;
- Tolka; and
- Santry Mayne Sluice.

Transitional Water Bodies

- Liffey Estuary Lower;
- Liffey Estuary Upper;
- North Bull Island; and
- Tolka Estuary.

Coastal Water Bodies

- Dublin Bay; and
- Irish Sea Dublin (HA09).

The local authorities monitor the water quality at the following designated bathing water locations, within Dublin Bay:

- Dollymount Strand;
- Sandymount Strand;
- Merrion Strand; and
- Seapoint.

In addition, bathing water quality is also monitored at the following undesignated bathing water locations:

- Half Moon Swimming Club;
- Shelly Banks beach;
- North Bull Wall Causeway; and
- Sandycove.

The nearest monitored bathing waters outside of Dublin Bay, are:

- Claremont Beach – on the northern side of Howth Head and designated; and
- White Rock – south of Sorrento Point and undesignated.

Likely Significant Impacts

There is no abstraction from the local surface water environment proposed during either the construction or operation stages of the proposed project.

The construction stage of the proposed project includes large excavations to a depth of 2 m and smaller excavations at depths of up to 5 m, additionally there will be piling of structures for structural support. As a consequence, there may be some pumping of water found in excavations, which will be discharged into the site drainage network, and will ultimately be discharged to the receiving environment. The extent of any interaction with the surface water environment is thus comparable to general construction activities.

Standard construction activities include the production of environmental management plans and the adoption of measures, including the bunding of any fuels or chemicals, to prevent spillages into excavations or the drainage network. In addition, the management of suspended solids present in water pumped from excavations, is also a standard construction activity, using settling basins and interceptors.

The above analysis suggests that there is no likely significant impact by the project on surface water during the construction phase of the project. Consequently, no further assessment will be carried out during the preparation of the EIS, in respect of the construction stage.

The operational phase however does have a potential impact in that the proposed development will permit a change in the existing final effluent discharge. The Ringsend WWTP currently discharges final effluent into Lower Liffey Estuary at the location of the ESB Power Station cooling water discharge. The final effluent being discharged during the operational phase of the project will be different in the following respect:

- The volume of the discharge will be greater; and
- The quality of the final effluent will be improved.

There is a likely significant impact by the project on surface water during the operational phase of the project. This potential impact will be further assessed during the preparation of the EIS, in accordance with the methodology described below.

Data and Surveys

The data necessary to carry out the assessment will comprise:

- Bathymetric and hydrometric survey data to permit model construction and validation;
- Current water quality, based on available data gathered by statutory monitoring bodies;
- Current final effluent quality, based on available data gathered by the existing facility; and
- Future final effluent quality, based on the discharge standards set out in the current Wastewater Discharge Authorisation

Initially the data collected for the 2012 application will be updated, by reference to the ongoing monitoring records, with additional surveys as needed. In particular additional current profiling using acoustic Doppler current profiling instruments was undertaken in September and October 2015 to facilitate an updated calibration of the existing hydrodynamic model.

Assessment Methodology

The assessment of the potential impact arising from the changes to the final effluent discharge from the WWTP, will be assessed by reference to the following:

- The current water quality of the receiving waters relative to their environmental objectives, including recreational uses;
- The impact of the current final effluent discharge on the receiving waters, including any impact arising from the plant being overloaded;
- The impact of the future final effluent discharge on the receiving waters at maximum plant loading.

The assessment will utilise a hydrodynamic computer model of the receiving waters and will consider whether the impact from the future effluent is positive or negative, relative to the current effluent discharge. The assessment will also consider what impact the future effluent will have on the ability of the receiving waters to achieve their environmental objectives and the conservation objectives of adjacent sites. In accordance with the 'combined approach' (see Section 2.5) surface waters will be assessed in the EIS against both the EPA's Trophic Status Assessment Scheme (for designating nutrient 'sensitive areas' under the Urban Waste Water Treatment Directive) and against the WFD surface water quality classification scheme.

The water quality parameters proposed to be assessed are based on a mixture of the parameters set out in the current Wastewater Discharge Authorisation issued by the EPA, together with those parameters relevant to the receiving water legislation, and consisting of:

- Biochemical Oxygen Demand (BOD);
- Suspended Solids (SS);
- Ammonia ($\text{NH}_3/\text{NH}_4^+$);
- Dissolved Inorganic Nitrogen (DIN);
- Molybdate Reactive Phosphate (MRP); and
- E.Coliiforms.

Mitigation Measures

The objective of the assessment is to determine the appropriate final effluent quality standards compatible with the local environmental objectives. Alternatives and mitigation measures will be considered as part of this assessment.

5.3 Biodiversity

5.3.1 Receiving Environment – Terrestrial Ecology

The Ringsend extension will largely involve the upgrading of the works within the current property boundary of the existing plant. There are no significant flora or fauna within this already developed property. However, Brent Geese use the neighbouring grassland during the winter months. About 15% of the population of light-bellied Brent Geese who breed in Arctic Canada come to Dublin Bay for the winter. As part of the previous upgrade of the WwTP (2000 – 2003) there was some loss of this grassland habitat within the site boundaries. To compensate for the loss of this area of habitat DCC provided a two-hectare area nearby that is managed permanently for Brent Geese. There will be no reduction in this habitat as a result of the extension.

5.3.2 Likely Significant Impacts – Terrestrial Ecology

The most significant likely impact conceived at present is the disturbance impact on the land based ecology (in particular Brent Geese settling in the Ringsend Nature Park and the terns that nest on the ESB Dolphin) as a result of construction noise impacts. The direct impacts arising from the ESB cable works in the SPA shall also be assessed.

5.3.3 Data and Surveys

Updated survey data will be obtained from the Dublin Port Birds Project being undertaken by Birdwatch Ireland and Dublin Port. Baseline habitat usage by bird species will be determined from the survey data. Prey availability will be determined from intertidal sampling information.

5.3.4 Assessment Methodology

The potential links between nutrient discharges from WwTP and bird ecology will be examined. Nutrient levels are set to be reduced and the Biodiversity “competent expert” will examine the potential impacts, e.g. potential impact on the aquatic food chain which could ultimately impact bird species. Desk studies will be undertaken using ecological databases, such as NPWS and Birdwatch Ireland databases, will be examined. The assessment will focus on:

- Managing Natura 2000 Sites: The Provisions of Article 6 of the ‘Habitats Directive’ 92/43/EEC, European Commission, 2000
- Habitats listed in Annex I of the Habitats Directive
- Birds listed in Annex I of the Birds Directive
- The impacts on the wintering birds (Brent Geese) in the vicinity of the WwTP will also be assessed on the basis of comparison of any existing impacts and any lessons learnt during the previous construction phase (2000-2003).

It is noted that some concerns were expressed in submissions on the 2012 application regarding the total elimination of the Ringsend discharge from the Liffey Estuary (via the tunnel) and the potential impacts of that action on the SPAs. Consequently, the impacts of any change in emissions under the Revised Project will also be given detailed consideration. If necessary, evaluation shall have regard to

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

5.3.5 Mitigation Measures

Mitigation Measures shall be developed including the use of screening around buildings to prevent visual disturbance to birds on the grasslands. Likewise, excavation for cabling in grassland areas will be restricted to those seasons when the wintering birds are not present in the area. Long-term monitoring for potential impacts will also be considered if appropriate.

5.3.6 Receiving Environment – Aquatic Ecology

The Ringsend WwTP currently discharges to the Liffey Estuary at Ringsend. The development which is the subject of this scoping document, proposes to continue using the current discharge location in the Liffey Estuary at Ringsend. The Liffey Estuary lies within the confines of the Eastern River Basin District – River Basin Management Plan 2009 – 2015 which has identified the Liffey estuarine waters as good status and with a stated objective of maintaining that status.

Dublin Bay contains Natura 2000 designated sites [covered in greater detail in Section 6] as well as Blue Flag bathing beaches.

South Dublin Bay and River Tolka Estuary SPA

The EU Birds Directive pays particular attention to wetlands, and these form part of the SPA, the site and its associated waterbirds are of special conservation interest.

North Bull Island SPA

North Bull Island is a sand spit that developed after the construction of the North Bull Wall. This island is covered in dune grassland. Other important ecosystems associated with the island are salt marsh and mud flats. The reserves are of international scientific importance for Brent Geese and also on botanical, ornithological, zoological and geomorphological grounds.

North Dublin Bay cSAC

Annex I Habitats include fixed dunes, marram/shifting dunes, embryonic shifting dunes, dune slack, annual vegetation of drift lines, salicornia mud and sand flats, Atlantic salt meadows, Mediterranean salt meadows, mud and sand flats. Annex II species include Petalwort. The site overlaps with North Bull Island SPA.

South Dublin Bay cSAC

The site has extensive areas of sand and mudflats, a habitat listed on Annex I of the EU Habitats Directive. The largest stand of Eelgrass on the east coast occurs at Merrion Gates. New habitats are developing just south of Merrion Gates including embryonic dunes and a sand spit. This area is becoming increasingly important as a high tide roost site for waterfowl. The site overlaps with South Dublin Bay and River Tolka Estuary SPA.

Rockabill to Dalkey Island SAC

This candidate SAC was proposed in December 2012 and extends from Rockabill off the Skerries coast to Dalkey Island on the southern edge of Dublin Bay. The principle habitat of conservation interest is 'reefs' but the site is principally proposed for the protection of the species Harbour Porpoise ('Phocoena phocoena').

5.3.7 Likely Significant Impacts – Aquatic Ecology

The effect of the discharge will be a change in water quality in the receiving water and this can have an impact on the aquatic ecological environment. Furthermore, the introduction of nutrients can lead to eutrophying conditions and the promotion of periodic algal blooms and there has been a history of Ectocarpus blooms within the bay. The principal potential impacts relate to compliance with the 2009 Surface Water Quality Regulations and on green macroalgae in the Tolka Estuary.

Since the upgrade of the treatment works in 2003 there has been a marked improvement in the water quality in Dublin Bay (EPA Water Quality in Ireland Report (2008)) and the Eastern River Basin Management Plan has established water quality status for the receiving waters.

5.3.8 Assessment Methodology

The following guidance documents will be considered in the ecological assessment:

- Guidelines for Data and Surveys Assessment of Ecological Impacts of National Road Schemes, National Roads Authority, (2004)
- Guidelines for Ecological Assessment, Institute of Ecological and Environmental Management, (2002)
- Advice Notes on current practice (in the preparation of Environmental Impact Statements) as published in 2015
- DCC Biodiversity Action Plan (2015 - 2020) 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
- Managing Natura 2000 Sites: The Provisions of Article 6 of the ‘Habitats Directive’ 92/43/EEC, European Commission, 2000
- Circular L8/08 Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments. 2 September 2008.
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

The assessment will establish the current baseline ecological conditions, the construction and operational activities and will predict their impacts and changes (if any) to the baseline in the future. This will be followed by the determination of mitigation measures to avoid or attenuate potential impacts. The discharge from the WwTP under the Revised Project will be the prime area of assessment in terms of aquatic ecology. It will be assessed having regard to:

- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora Environmental Objectives (Surface Water) Regulations 2009 (Habitats Directive)
- Council Directive 79/409/EEC on the Conservation of Wild Birds
- Bathing Water Regulations 1992 and 2008
- Priority objectives of the Dublin Bay Water Quality Management Plan
- The potential impact on the Natura 2000 sites (Special Areas of Conservation, Special Protected Areas and Bathing Waters) around Dublin Bay.
- European Communities Environmental Objectives (Surface Waters) Regulations 2009 -S.I. No. 272 of 2009 and the water quality status as defined by the ERBD

It will be assumed that if the receiving waters comply with these objectives that it follows that there will be no significant impact on the ecological environment.

5.3.9 Mitigation Measures

Consultation will take place with ecologists who are expert in the factors affecting saltmarsh development. Likewise, invertebrate prey of birds will be assessed from existing baseline data, modelling of effluent plume and literature review.

5.4 Population and Human Health

5.4.1 Receiving Environment - Scope

The likely impacts on human beings will be addressed in this section of the EIS, including land use, economic activity, employment, settlement patterns, social patterns and human health [considered with reference to other headings such as air and water.

Likely impacts on human beings such as dust, odour, traffic, noise and vibration are also covered under specific environmental topics included elsewhere in the EIS.

5.4.2 Likely Significant Impacts

Land Use

Construction of the project will require usage of 0.8 hectares of lands which have been set aside for expansion within the existing WwTP site. Direct impacts from the project itself are not seen as significant. However, the additional wastewater treatment capacity provided by the project will ensure that development in the Greater Dublin Area can continue in line with the City and County Council Development Plans and is not prejudiced by the absence of this essential utility infrastructure. This is considered a significant positive impact.

Economic Activity

The construction phase of the project has the potential to affect local people, businesses and activities, both positively and negatively.

The potential impact in either the construction or operational phases is considered of minor consequence.

Economic activity in the local and Greater Dublin areas should be positively impacted by the provision of the enhanced facility at Ringsend.

Employment

The jobs associated with the construction and operational phases shall be assessed and presented in the EIS. It is anticipated that considerable employment opportunities will arise during the construction phase. Jobs will be created on the construction site and also indirectly through suppliers and drivers.

Settlement Patterns

Settlement patterns are likely to be positively impacted for the Greater Dublin area by the ability to implement Development Plans, as outlined previously.

Social Patterns

Not seen as an area of concern in assessment of impacts arising from the project but assessment will be carried out as part of the EIS. Social patterns are likely to be positively impacted.

Human Health

An assessment will be undertaken on potential risks or nuisances that may be caused to human beings during the construction and operational phases. Air quality, water quality, traffic, noise etc. shall be considered when assessing this item.

5.4.3 Data and Surveys

Published human health data will be sourced together with literature review. Surveys are not envisaged.

5.4.4 Assessment methodology

A desktop study will be undertaken to determine the impact on land use in the area.

A desktop study will be carried out to establish the baseline associated economic activity. Data sources will include development plans, the Greater Dublin Strategic Drainage Study (GSDSDS) and census data.

Employment opportunities will be identified and desk top studies will be undertaken for settlement and social patterns.

A desktop study on human health will be carried out examining the potential risks to humans during the construction and operational phases.

5.4.5 Mitigation Measures

It is considered that the impacts will be largely positive in the area of Population and Human Health so that development of Mitigation Measures may not be an issue. However, any Mitigation Measures developed for Air, Water and Traffic will be considered also in the context of human health

5.5 Land & Soils

5.5.1 Receiving Environment - Scope

This chapter of the EIS, as per the 2015 EIS Guidelines, will address the likely significant impacts on land [e.g. land take], soil [e.g. organic matter, erosion, compaction and sealing], agricultural capability, geology and hydrogeology [has been considered as part of Water] during the construction and operation of the proposed scheme. Land take is largely confined to the existing site with temporary land takes for construction compounds and ESB connections outside the site. Agriculture is not a feature of the immediate area of the site.

5.5.2 Likely Significant Impacts

Generation of waste material arising from excavated material

- The excavation of potentially contaminated underlying ground and how it will be handled and disposed or recovered;
- Risk of contaminating made ground and natural sediments during construction activities;
- Impact on the quality of sediments over the operational life of the scheme.

- Impact of the presence of Japanese Knotweed and the risk of spread.

Additionally, the disposal of waste material in the form of treated biosolids will be considered in the EIS. Currently pasteurised biosolids are removed from the site for re-use on agricultural lands in South Leinster on account of their value as soil conditioner and fertiliser.

5.5.3 Data and Surveys

Surveys will be undertaken to determine the extent of Japanese Knotweed in the area and to devise measures for its removal. Records of composition of made ground on the site shall be examined and additional ground investigations undertaken to determine the waste acceptance classifications (WAC) of spoil arising.

5.5.4 Assessment Methodologies

The methodology for assessment of the impacts on the soil and geology will be undertaken in accordance with recommendations in Geology in Environmental Impact Statements - A Guide from the Institute of Geologists of Ireland (2002).

Potentially contaminated land will be characterised and any other potential risks will be identified.

Relatively minor volumes of excavated material will be generated during the construction phase. The volumes of excavated material will be calculated and the potential options for re-use of the material will be assessed. Requirements and recommendations will be indicated for the disposal or recovery of wastes. Excavated material shall be disposed in compliance with Waste Management Acts and Regulations. Biosolids reuse shall also be considered under this section and in compliance with Irish Water's National Wastewater Sludge Management Plan.

The Irish Water National Sludge Management Plan will set out a national strategy, which will ensure that each individual facility producing sludge will be in compliance with European and National Legislation and regulations, including:

European

- Sewage Sludge Directive
- Nitrates Directive

National

- Waste Management Act
- Regulations for the use of Sewage Sludge in Agriculture
- Regulations for Good Agricultural Practices for Protection of Waters
- Regulations for Registration of Sewage Sludge Facilities

5.5.5 Mitigation Measures

Management Plans, including method statements, shall be developed for the classification and removal of contaminated soils and for the treatment and/or removal of Japanese Knotweed (or other invasive species present). The competent experts shall assess the impacts and together with the engineering design team develop detailed mitigation measures.

5.6 Air

5.6.1 Receiving Environment

Air is the title used to consider the impact of the project in respect of the following factors:

- Air quality;
- Odour;
- Noise;
- Vibration; and
- Radiation.

In assessing potential impacts a key factor will be identifying and categorising the local receptors, which can be broadly grouped as follows:

- Residential areas – categorised by proximity and direction
- Conservation and recreational areas
- Commercial and industrial areas – categorised by proximity, direction and nature of activity

The sensitivity of the different categories of receptors is relevant to the significance of any likely impacts, residential areas being an example of a receptor, which would be sensitive to impacts during daytime and night-time, whereas other receptors may not be quite as sensitive during night-time periods.

Immediately local to the Ringsend WwTP are:

- Commercial and industrial premises to the west, north and east; and
- Conservation and recreational areas to the west, south and east.

Residential areas are located to the:

- West and south-west of the plant at a distance of approximately 1 km; and
- North and south of the plant at a distance of approximately 2 km.

5.6.2 Air Quality – Likely Significant Impacts

The Ringsend Wastewater Treatment Plant has many similarities with industrial manufacturing premises, including the utilisation of a range of machinery and heavy goods vehicles as part of the general operation of the facility.

In addition, the construction of the works will also result in additional traffic volumes and potential increased levels of dust, which could impact on the air quality.

Urbanised and industrialised areas typically experience elevated levels of pollutants and suspended particles due to the operation of machinery and traffic movements. The Ringsend facility is an existing premises in a heavily industrialised area, however there is potential for the site to contribute to local air pollutants and suspended particles during the construction phase of the project.

5.6.3 Air Quality – Data and Surveys

Data will be collated in respect of the current background air quality, using:

- publicly available data;
- previous surveys; and
- additional surveys, if necessary.

5.6.4 Air Quality – Assessment of Likely Impact

The assessment of the impact will primarily be by reference to European Ambient Air Quality and Clean Air for Europe (CAFÉ) Directive, which has superseded much of the earlier legislation.

The principal pollutants covered by the legislation are:

- Sulphur dioxide;
- Nitrogen dioxide and other nitrogen oxides
- Particulate matter – 10 µm and 2.5 µm in size (PM₁₀ & PM_{2.5})
- Lead
- Carbon monoxide and benzene
- Ozone
- Arsenic, Cadmium, Nickel and Benzo(a)pyrene

5.6.5 Air Quality – Mitigation Measures

Alternatives and mitigation measures will be considered if a likely significant impact is identified. However, the use of modern machinery and construction practices (complying with relevant Irish and European standards) will ensure that any impacts on air quality are minimised.

5.6.6 Odour – Likely Significant Impact

Wastewater and sludge treatment facilities have the potential to cause nuisance odours, and it is noted that the Ringsend facility caused significant odour nuisance when it first commenced operation. As a consequence, odour is identified as a likely significant impact, which needs to be assessed.

There is no likely significant impact anticipated from the construction activities, save where those construction activities require temporary interference with the odour control units or their standard operating procedures.

5.6.7 Air Quality – Data and Surveys

The data necessary to assess the likely impact of odours from the facility will consist of the following information:

- Meteorological data;
- Topographical data;
- Previous odour surveys from the processes on site; and
- Additional surveys to assess the performance of the current odour control units.

5.6.8 Odour – Assessment of Likely Impact

The collected data will then be assessed using the USEPA AERMOD odour dispersion model to estimate the impact of the facility on the local environment and assist in the determination of an appropriate operational standard for the facility.

5.6.9 Odour – Mitigation Measures

It is anticipated that the necessary mitigation measures will include a continuation of the provision of odour control facilities to ensure that the standard proposed in the 2012 application can be achieved.

5.6.10 Noise – Likely Significant Impact

The upgrade of the Ringsend WwTP will require the use of machinery, and activities, of varying noise levels, during both the construction and operation phases. In addition, some of the construction activities may need to be carried out at night, and the completed facility will operate on a continuous basis.

As a consequence, there is potential for a likely and significant impact from noise, both in terms of magnitude and time of day.

5.6.11 Noise – Data and Surveys

An assessment of the background noise will initially be required to determine the nature of the existing environment.

Construction activities will also be assessed by reference to the type of machinery and activities anticipated as necessary for the progression of the project, using literature values. Operational equipment will be assessed by reference to measurements of the existing activities.

5.6.12 Noise – Assessment of Likely Impact

The assessment of the likely impact will involve two different elements:

- Construction activities
- Operating activities

The assessment of the impact of the different activities will be in accordance with recognised industry standards, to estimate the propagation of the noise into the surrounding areas and the impact at local receptors.

5.6.13 Noise - Mitigation Measures

It is anticipated that the achievement of suitable daytime and night-time noise levels will be achieved by using appropriate acoustic enclosures and adopting appropriate work practices.

5.6.14 Vibration – Likely Significant Impact

There is potential for vibration from some construction activities to cause a likely significant impact in the local environment. Piling is one activity, which might cause local vibrations, and will require assessment.

Wastewater treatment facilities are not generally recognised as sources of vibration and there are no facilities proposed, which would cause any significant vibration during the operation phase.

5.6.15 Vibration – Data and Surveys

Vibration data for the anticipated construction activities will be taken from literature sources.

5.6.16 Vibration – Assessment of Likely Impact

The assessment will be focused on identified activities, which might cause vibration nuisance in the local environment. In particular, the propagation of vibration from piling will be assessed and whether any sensitive receptors might be affected.

5.6.17 Vibration – Mitigation Measures

Mitigation measures required in respect of any construction activity identified as causing an impact will initially consider alternative construction methodologies.

5.6.18 Radiation – Likely Significant Impacts

The site is not located in high radon area, as estimated by the EPA radon mapping. In addition, there are no significant radiation sources associated with the project.

As a consequence, there are no likely significant impacts identified and no assessment is currently anticipated as being required.

5.7 Climate

5.7.1 Receiving Environment

Environmental impacts related to climate can consist of:

- The contribution by the project to climate change; and
- The vulnerability of the project to climate change effects.

The receiving environment thus consists of the general environment in respect of the climate change impacts, such as green house gas (GHG) emissions, and the surrounding environment in respect of vulnerability issues, such as sea level rises.

5.7.2 Likely significant impacts

The areas to be examined for likely significant impacts, is the impact of the project construction and operation on climate change, together with the vulnerability of the site to sea level rises.

5.7.3 Data and Surveys

The data gathered for this assessment will consist of guidelines and literature produced by public and industry bodies for this purpose.

5.7.4 Assessment methodology

The assessment of the climate change impacts will be by reference to recognised tools, such as the EPA Carbon Calculator. The impact of the more intensive rainfall events likely to arise in the catchment as a result of climate change, as well as predicted medium to long term sea level rise over the design life of the Ringsend WwTP, will be assessed relative to IPPC and OPW guidance.

5.8 Material Assets

5.8.1 Receiving Environment - Scope

Material assets are resources that are valued and intrinsic to places. These may include archaeology and cultural heritage which are discussed in a separate section of the EIS. Material assets may also include properties, utilities and natural resources.

5.8.2 Likely significant impacts

- Mitigation by avoidance will be applied to utilities such as underground services and pipelines, the properties of GNI, ESNB or other utilities.
- The completed and upgraded WwTP itself is seen as a significant positive material asset for the population and community of the Greater Dublin Area.

5.8.3 Data and Surveys

Consultation will take place with the relevant utilities to determine exact location, depth and specifics of underground cables and pipelines.

5.8.4 Assessment methodology

The assessment of material assets will include a desk-based exercise, to identify properties, utilities and resources that may be affected by the proposed scheme. It will also include consultation with the relevant parties.

5.8.5 Mitigation Measures

Management Plans including method statements shall be developed for excavations in proximity to underground utility cables and pipelines.

5.8.6 Traffic - Receiving Environment

The principal receptors in relation to traffic issues are considered to be:

- The local residents (nuisance, disruption, noise and air quality); and
- Neighbouring Development and Businesses.

The traffic associated with the proposed extension will comprise operational traffic and construction traffic. The operational traffic consists of:

- Site Staff;
- Tankered Liquid Waste incoming to site;
- Biosolids Removal off site; and
- Delivery vehicles.

It is not anticipated that there will any significant increase in operational traffic associated with staff movements as a result of the extension. There will be a small increase in the tankering of liquid waste and the removal of biosolids as the volumes generated will increase in tandem with growth in demand.

The construction phase traffic will be “moderately” more significant but will be temporary in nature. Construction related traffic will be light in the context of current traffic levels in the area. The overall

area experiences high peak traffic flows. The port tunnel has opened since the last construction phase [1999/2003] and should ensure less congestion within the city centre by heavy goods vehicles (HGVs).

The traffic associated with the construction phase will consist of:

- Construction workers coming and going from site. This element will result in an increase in traffic at peak times. It is anticipated that this will be considerably less than for the previous phase; and
- Delivery of materials and equipment associated with construction and the removal of excavated spoil.

Traffic levels will vary during construction phase with peaks occurring as a result of particular operations (e.g., concrete pours, special deliveries).

5.8.7 Traffic - Likely Significant Impacts

There is no significant change in traffic patterns predicted during the post-construction operational phase and consequently no significant impact is anticipated resulting from the proposed construction and operation of the facility expansion as proposed.

5.8.8 Data and Surveys

New traffic counts will be undertaken at the various junctions from the site to the main national road network, i.e. where project traffic flows merge with background traffic.

5.8.9 Traffic - Assessment Methodology

Road junctions will be modelled using industry standard computer models (e.g. Picady, Oscady by TRL) using the survey results as baseline inputs. Modelling will look at peak hour capacities, queuing and delays. Based on the survey results, a "competent expert" Traffic specialist will undertake a traffic impact assessment in terms of the existing road network and following consultation with the Roads and Traffic Department of Dublin City Council. The impact of the change in traffic volume and patterns will be assessed on the basis of the light/moderate increase in the traffic volume. An overall assessment will be made of both the temporary construction phase impacts and the long term operational impacts. Development of a Traffic Management Plan will be undertaken. Regard will be had to the traffic restrictions imposed on the 2012 project.

5.8.10 Mitigation Measures

A Traffic Management Plan, including mitigation measures (e.g. restrictions during peak commuter hours) will be developed for the project's construction stage in consultation with the Roads and Traffic Department of Dublin City Council.

5.9 Cultural Heritage

5.9.1 Receiving Environment

In the surrounding area of the Ringsend WwTP there are a number of protected structures and areas containing national monuments and archaeological zones. The following protected structures are listed in the Dublin City Development Plan 2011 – 2017 and are illustrated on Drawing No.9 in Appendix A of this report:

- Former St. Catherine's Hospital (RPS 6793);
- Remnants of Pigeon House Fort (RPS 6794);

- Former Pigeon House Hotel (RPS 6795);
- Pigeon House Power Station (RPS 6796); and
- Great South Wall (RPS 6798).

While the proposed development is located outside the Zone of Archaeological Interest for the historic city of Dublin (RMP ref. no. DU018-0020), zones of archaeological potential identified in the Dublin City Development Plan extend into the Ringsend site, and a number of other recorded monuments and sites (refer to Drawing No. 9) are located within the vicinity of the proposed development such as:

- Blockhouse (DU019-027----);
- Battery (DU019-028----); and
- Sea wall (DU019-029002-)

5.9.2 Likely significant impacts

The potential for impact on archaeological heritage can occur during ground disturbances and excavations will be required during the upgrade of the WwTP. With regards to the protected structures within the vicinity, there will be no direct impact on any structure previously listed and as shown in Drawing No.9.

A review of the proposed development indicates that significant impacts on cultural heritage aspects are unlikely.

5.9.3 Data and Surveys

The assessment in terms of cultural heritage will be based on a desk top review of available data and field assessments of the site and surrounding areas. This will allow for identification of likely significant impacts on Archaeology, Architectural Heritage, Folklore and History in the area as outlined in the Environmental Impact Statement Guidelines 2015.

5.9.4 Assessment Methodologies

The National Monuments Acts 1930-2004 and the Planning and Development Act (as amended) are the principal legislative instruments in the protection of archaeological, architectural and cultural heritage in Ireland. Archaeological trial pits have been excavated on site over recent months and no archaeological items of interest have been discovered. Nonetheless an archaeological on site monitoring programme shall be proposed for all excavation works. The recommendations of the 2012 EIS and consent shall be reviewed but are unlikely to have altered since that time.

Zones of Archaeological Interest, Protected Structures as already outlined, Conservation Areas and Historical Research publications shall again be considered. Conditions 14 and 15 of the An Bord Pleanála 2012 planning consent outline archaeological measures to be implemented during the construction phase. These requirements shall be revisited and compliance measures developed for the EIS.

5.9.5 Mitigation Measures

The level of significance of any and all of the impacts associated with the development will be assessed and a full suite of appropriate mitigation measures will be incorporated into the EIS to reduce the impact on cultural heritage aspects in the vicinity.

5.10 The Landscape

5.10.1 Receiving Environment

The Ringsend Wastewater Treatment Plant is located on the Poolbeg peninsula and surrounded by both industrial sites and scenic landscape. Views of the peninsula are dominated by the twin Poolbeg stacks, which rise to over 210 m above ordnance datum (AOD) and the associated power generation facility and large oil tank farms. The Dublin Waste to Energy facility is currently being constructed immediately to the west of the WwTP site.

The open waters of Dublin Bay, with Bull Island across the estuary, lie to the northeast, east and southeast of the peninsula. The surrounding landscape of Dublin Bay takes in a wide sweep from the elevated ground of Howth head through Sutton to Clontarf in the north and from Irishtown, through Sandymount and Blackrock, to Dalkey and Killiney Head to the south. The scenic surroundings attract numerous people to the area for the coastal walks, bird watching, looking at the scenery including the beach, bay and recreational activities in the area.

5.10.2 Likely Significant Impacts

During the construction phase of the WwTP Upgrade the landscape will be impacted by the presence of cranes, construction compounds and lighting, site offices and hoarding. Given the existing nature of the area, visual impacts arising from the construction activities, including cranes and large construction equipment will be limited in impact and of temporary or short-term duration.

The existing site landscaping bunds to the east of the site will be removed to allow for the construction of an internal link circulation road. To cater for this road, the site boundary fence line may need to be relocated in the South East corner.

Given the location and its existing character, the development will not have an adverse impact on the overall character of the area.

5.10.3 Data and Surveys

A series of photomontages were previously prepared for the 2012 EIS, these will be taken into account in the preparation of a new set of photomontages to represent the Revised Project's impact on the landscape.

The Landscape and Visual Assessment in the EIS will involve revisiting aerial photography, various publications and reports, together with visits to the site and environs of the proposed development. In addition, a series of photomontages will be developed from various viewpoints in the surrounding areas will be included in the EIS.

5.10.4 Assessment Methodology

The landscape and visual impact assessment will examine the potential effects of the proposed construction works on visual amenity of the area and the scale of the proposed development compared to the current development.

The assessment will also address the impact on the Landscape Character and Context, Views and Prospects and Historical Landscapes during the construction and operation phase of the proposed upgrade.

The EIS Visual Impact assessment will have regard to the current versions of EPA “Guidelines on the information to be contained in Environmental Impact Statements” and “Advice Notes on Current Practice in the preparation of Environmental Impact Statements”. Consideration shall also be given to the City Development Plan and former DDDA’s “Draft Planning Scheme for Poolbeg” and its current status in respect of a proposed “network landscape structure of destinations and links”.

5.10.5 Mitigation Measures

Potential mitigation measures to minimise visual impacts will be assessed and will include:

- Alternative structure finishes;
- Appropriate landscaping.

5.11 Cumulative Impacts, Indirect Impacts and Interaction of Effects

The cumulative impacts of the proposed development together with other existing and proposed projects, will be addressed. The proposed projects that will be considered are generally those that are ‘committed development’, i.e. have received planning permission but have not yet been built, and for which there is information in the public domain at a sufficient level of detail to allow their potential cumulative impacts to be assessed. Known projects that will be included in the EIS (and NIS) for the assessment of cumulative/in-combination impacts include:

- Dublin Waste to Energy Plant;
- Alexandra Basin Redevelopment Project at Dublin Port,
- ESB Poolbeg Cooling Water Channel Sheet-Pile Repairs, and
- National Oil Reserve Agency Tank Farm Project (ESB Poolbeg Site).

In addition, the Greater Dublin Drainage Project (See Section 1.3) will be specifically considered. While not yet a committed development, this Irish Water project is currently at planning preparation stage, forms part of the GSDS Final Strategy, and is intrinsically linked to the Ringsend WWTP and its catchment.

Section 6: Proposed Scope of Natura Impact Statement

6.1 Introduction

The scoping of a Natura Impact Statement (NIS) is concerned with identifying the implications for Natura 2000 sites, with respect to their conservation objectives, of LIKELY and SIGNIFICANT effects caused by the project. The effects can arise directly or indirectly from the project, or in combination with other projects.

The receiving environment, in the context of a NIS, is thus exclusively focused on possible impacts on the Natura 2000 Special Areas of Conservation and Special Protection Areas.

It should also be noted that, since the purpose of the Natura 2000 sites is the conservation of habitats and species, there is considerable overlap between the NIS and the Biodiversity section of the EIS. The content of Section 5.3 of this document will thus also be applicable to the NIS.

The current guidance for Appropriate Assessment in Ireland is contained within the document “Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities”, published by the Department of the Environment Heritage and Local Government, December 2009 and revised February 2010.

The guidance states that the Natura sites to be assessed should be those within the likely zone of impact of the project. UK guidance recommends all sites within 15km should be considered, however the DECLG guidance advises that the potential zone of impact should be considered on a case by case basis and suggests that for some projects this could be as low as 100m.

In this instance it is considered that likely and significant effects could arise from two possible sources:

- Construction Activities – either directly or indirectly affecting a Natura 2000 site; and/or
- Operations – only indirect effects are considered likely, specifically due to the final effluent discharge affecting a site, via the tidal water movements within Dublin Bay.

It is thus considered necessary to assess all sites located within Dublin Bay and subject to the above effects.

Additional sites further afield may also be assessed if an indirect impact is identified as being possible and arising from the construction or operation phase of the project. No such sites have been identified at this stage.

6.2 Construction Activities

The Natura 2000 sites of concern with respect to construction activities are considered to be:

- Site code 004024 South Dublin Bay and River Tolka Estuary SPA
- Site code 000210 South Dublin Bay cSAC

These sites are adjacent to the project site and could be impacted by the construction activities. A particular concern is disturbance to the birds using the SPA site. The site is of particular international importance as a wintering location for the Light-Bellied Brent Goose.

Data regarding birds using the site will be updated from the 2012 application using the ongoing Dublin Port Birds Project being undertaken by Birdwatch Ireland and Dublin Port. It is not considered necessary to supplement this data with any other surveys.

The collected bird data will be used to assess trends in bird populations over recent years and to consider the likely impact caused by the proposed construction activities. The proposed construction activities will include standard industry best practice as the basis for potential impacts.

Mitigation of any identified potential impacts will be considered and proposed in the NIS.

6.3 Operations

The Natura 2000 sites of concern with respect to impact from the final effluent discharge are:

- Site code 004024 South Dublin Bay and River Tolka Estuary SPA
- Site code 000210 South Dublin Bay cSAC
- Site code 004006 North Bull Island SPA
- Site code 000206 North Dublin Bay cSAC
- Site code 004113 Howth Head Coast SPA
- Site code 004172 Dalkey Islands SPA
- Site code 003000 Rockabill to Dalkey Island cSAC

The above sites all contain qualifying interests, which could be impacted by the final effluent discharge, via the Dublin Bay tidal waters.

There are two sources of data to be utilised for this assessment. Data regarding birds using the site will be gathered from the ongoing Dublin Port Birds Project. In addition, a benthic survey was carried out in September 2015 at a range of 25 locations around Dublin Bay

The collected data will be used to assess trends in bird and benthic populations over recent years and consider the likely impact caused by the proposed final effluent discharge.

In addition the assessment shall also consider the contribution of the project towards the objectives of the Water Framework Directive and whether there is a link between the objectives of the Water Framework Directive and the objectives of the Directives giving rise to the Natura 2000 sites. An overlap between this analysis and the analysis described in Section 5.2 of this document in respect of the hydrodynamic modelling of the final effluent discharge will thus arise. The proposed methodology for the hydrodynamic modelling and the parameters to be modelled are thus also relevant to the NIS.

Mitigation of any identified potential impacts will be considered and proposed in the NIS.

6.4 In-Combination Effects

The same approach as detailed in Section 5.11 will apply in respect of the NIS.

Section 7: Conclusion

An Environmental Impact Assessment (EIA) and Appropriate Assessment (AA), as outlined in the earlier chapters of this report, will be undertaken as part of the planning process associated with the proposed development at Ringsend WWTP. As part of the EIA process, Irish Water will prepare a detailed Environmental Impact Statement (EIS) describing the potential environmental impacts which may arise as result of the construction and operational phases of the proposed development. As part of the AA process, Irish Water will prepare a Natura Impact Statement (NIS) describing the potential impacts of the project on sites in the Natura 2000 Network.

This Scoping Document is intended to outline key issues to be addressed in the preparation of the EIS and NIS, and the proposed predictive and evaluation methodologies to be used. Consultation with the public, statutory organisations and non-statutory organisations is being undertaken, based on this document, to ensure input from all interested parties from the earliest stages of the EIS and NIS preparation. Open days will be held and observations, comments and submissions arising during this consultation phase, will be considered before preparing a ‘Scoping Submissions Report’. The ‘Scoping Submissions Report’ will include comments and submissions from the consultation phase and will be made available on the project’s website (www.water.ie/ringsend). The final methodology to be adopted in the preparation of the EIS and NIS should be finalised at this stage and will address all likely significant environmental impacts including issues brought forward during the consultation process.

The completed EIS and NIS will be submitted to An Bord Pleanála as part of the formal planning application process.

Open Day Information

Thursday, 21st April

Sutton: Marine Hotel – 10am to 2pm.

Clontarf: Clasaic Centre – 4pm to 7pm.

Saturday, 23rd April

SPORTSCO, South Lotts Road, Ringsend – 10am to 6pm.

Tuesday, 26th April

Killiney: Fitzpatrick Castle Hotel – 10am to 2pm.

Dun Laoghaire: Royal Marine Hotel - 4pm to 8pm.



For further information, or to make a submission, please:

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Post: Ringsend Project, PO Box 11561, Dublin 8

Visit: www.water.ie/ringsend

Appendix A: Schedule of Drawings

Drawing No.	Drawing Title
No.1	Ringsend WwTP- Site Location
No.2	Existing WwTP Facility
No.3	The Revised Project Main Elements
No.4	Conservation Designations Special Areas of Conservation
No.5	Conservation Designations Special Protection Areas
No.6	Conservation Designations Proposed Natural Heritage Areas
No.7	Bathing and Recreational Areas
No.8	Water Framework Directive Categorisations
No.9	Conservation Designations National Monuments & Archaeological Zones
No.10	Conservation Designations-UNESCO Biosphere





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