

Ringsend Wastewater Treatment Plant Upgrade Project Planning Application



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Planning Application Report

June 2018

PLANNING APPLICATION REPORT

Strategic Infrastructure Development

**Ringsend WwTP Upgrade Project At Ringsend
WwTP, Pigeon House Road, Dublin 4, including A
Regional Biosolids Storage Facility At Newtown,
North Road/R135, Dublin 11**
For

Irish Water

Prepared By



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1 INTRODUCTION

This Strategic Infrastructure Development (SID) Planning Application Report has been prepared by Stephen Little & Associates, Chartered Town Planning & Development Consultants on behalf of The Applicant (Irish Water). This Report accompanies a Section 37E application being made directly to An Bord Pleanála (ABP) under the provisions of Section 37A (Strategic Infrastructure Development) of the Planning and Development Act 2000, as amended (The Act).

As the development for which permission is being sought has been deemed to be Strategic Infrastructure, this planning application is accompanied by an Environmental Impact Assessment Report (EIAR), an Appropriate Assessment Screening Report and a Natura Impact Statement.

1.1 Project Background

Irish Water is making this application to ABP for Permission for a period of 10 years, for Proposed Development comprising revisions and alterations to the existing and permitted development at the Ringsend Wastewater Treatment Plant (WwTP), Pigeon House Road, Dublin 4 and for a new Regional Biosolids Storage Facility (RBSF), Newtown, North Road (R135), Dublin 11; being two components of an integrated wastewater treatment project (the Proposed Development).

On 16th November 2012 ABP granted approval to Dublin City Council under section 226 of the Planning and Development Act 2000, as amended, for the Ringsend Wastewater Treatment Works submission in accordance with plans and particulars, including an Environmental Impact Statement and Natura Impact Statement, lodged with the Board on the 13th of April, 2012 (ABP Reference Number: 29N.YA0010 as amended by: 29N.YM0002 & 29N.YM0004)(the 2012 Approval).

The 2012 Approval proposed to expand the existing wastewater treatment works at Pigeon House Road, Ringsend, Dublin 4 to a capacity of 2.4 million population equivalent within the confines of its current site. The 2012 Approval included the following elements of works:

- Additional secondary wastewater treatment capacity at the wastewater treatment works site (approximately 400,000 population equivalent) including associated solids handling and ancillary works.
- A 9 kilometre Long Sea Outfall (in tunnel), commencing at an onshore inlet shaft approximately 350 metres east of the wastewater treatment works and terminating in an underwater outlet riser/diffuser in Dublin Bay.
- Road network improvements in the vicinity of the site (during the construction phase).

Two applications were subsequently made to amend the terms of the 2012 Approval and were approved by ABP under section 146B of the Planning and Development (Strategic Infrastructure) Act 2006. The approved amendments were as follows:

- Provision of a temporary access to the WwTP site on the north boundary of the site along Pigeon House Road, temporary removal of two areas of landscaping bunds located on the eastern perimeter and the provision of an internal circulation road and adjustment of the site boundary fence in the south east corner of the site (ABP Reference Number 29N.YM0002, June 2016).
- Omission of three previously approved construction site compounds and provision of three new temporary construction site compounds (ABP Reference Number 29N.YM0004, January 2018)

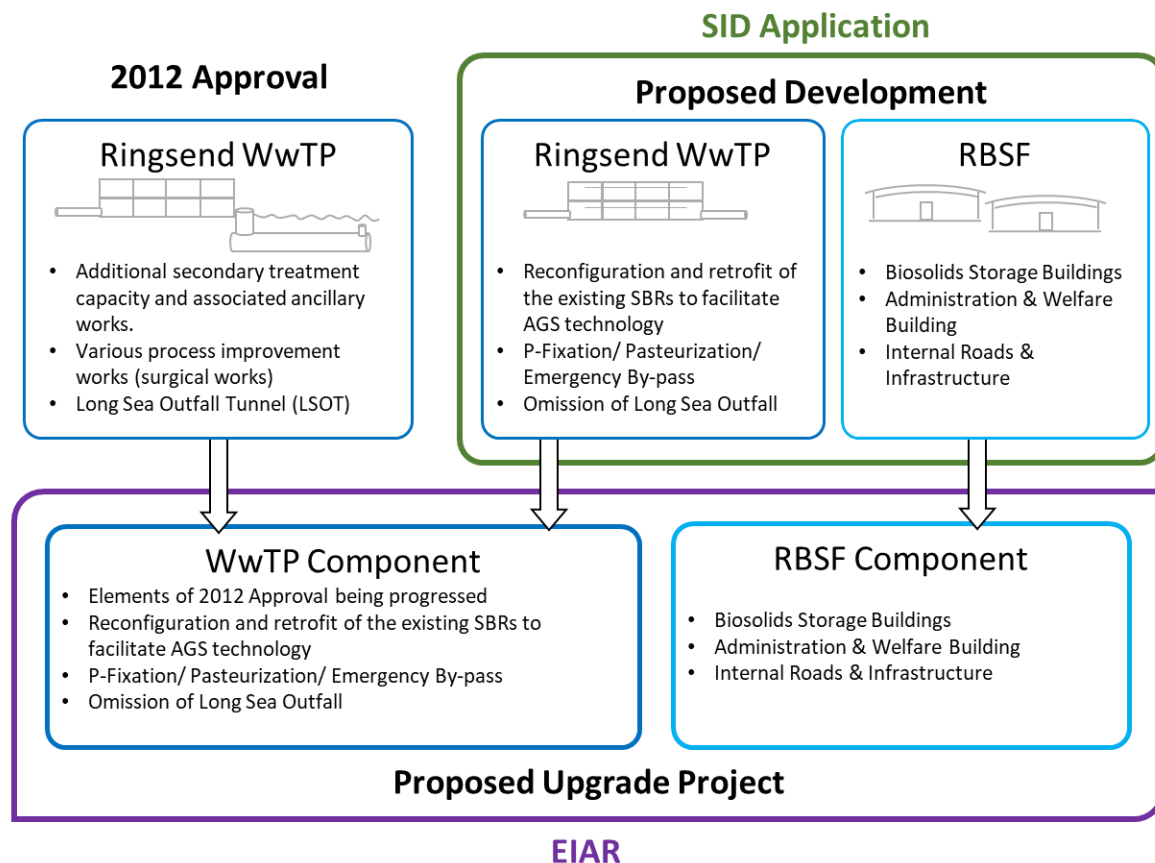
The Proposed Development comprises revisions and alterations to the 2012 Approval. The proposed revisions and alterations will continue to facilitate the expansion of the existing wastewater treatment works to its capacity of 2.4 million population equivalent within the confines of its current site, as permitted under Reg. Ref 29N.YA0010. However, this will now be achieved primarily through the introduction of aerobic granular sludge (AGS) technology throughout the plant. The introduction of this technology will facilitate the omission of the 9 kilometre Long Sea Outfall Tunnel (LSOT) and the continued use of the existing outfall. Figure 1 illustrates the Proposed Development in the context of the overall Ringsend WwTP Upgrade Project.

Further details are provided under Section 5 of this Planning Report and Volume 2, Section 3: Description of Proposed Upgrade Project of the EIAR enclosed with this application.

Some elements of the 2012 Approval works have been advanced as follows:

- Various LSOT preparatory works including road improvements and tunnel boring machine power supply cable laying.
- Some 'surgical works' are in progress and others have been completed and typically comprise mechanical plant installation and/or upgrade; electrical installation and/or upgrade; together with, where necessary, associated minor building and/or civil works.
- Construction of access road to the southeast of the WwTP; Construction of additional secondary wastewater treatment capacity (in progress); Construction of temporary access on northern boundary.

Figure 1: The Proposed Development in the context of the Proposed Upgrade Project.



1.1.1 The Proposed Development

The Proposed Development intended to be carried out by Irish Water at the Ringsend WwTP comprises revisions and alterations to the 2012 Approval. The proposed revisions will continue to facilitate the expansion of the existing wastewater treatment works to its capacity of 2.4 million population equivalent within the confines of its current site, as permitted. However, this will now be achieved primarily through the introduction of aerobic granular sludge (AGS) technology at the Ringsend WwTP. The introduction of this technology will facilitate the omission of the 9 kilometre Long Sea Outfall Tunnel and the continued use of the existing outfall.

Permission is now being sought, pursuant to Section 37E of the Planning & Development Act 2000, as amended, for Proposed Development at Ringsend WwTP and RBSF comprising of two principal components of an integrated wastewater treatment project: -

- **Component 1 - Ringsend WwTP:** Upgrade works at the Ringsend WwTP, Pigeon House Road, Dublin 4 and,
- **Component 2 - RBSF:** A Regional Biosolids Storage Facility at Newtown, North Road (R135), Dublin 11.

1.1.1.1 Component 1 - Ringsend WwTP

The Proposed Development at the Ringsend WwTP for which permission is now being sought comprises:

- Omission of elements of the development works previously approved by ABP; and
- Additional development works in the upgrade of the WwTP.

The Proposed Development will continue to facilitate the expansion of the existing wastewater treatment works to its capacity of 2.4 million population equivalent within the confines of its current site, as permitted in the 2012 Approval. However, this will now be achieved primarily through the introduction of aerobic granular sludge (AGS) technology within the plant. The introduction of this technology will facilitate the continued use of the existing outfall. Therefore, the 9 kilometre Long Sea Outfall Tunnel, associated onshore inlet shaft and construction compound will be omitted.

The works proposed at the Ringsend WwTP for which permission is now being sought comprise:

- Reconfiguration and retrofitting of the existing Sequencing Batch Reactor (SBR) Tanks, up to 24 no. in total, to facilitate the use of a new AGS technology.
- Associated works, including the provision of:
 - A Sludge Pasteurisation Building (approximately c.31.5m x c.14.5m x c.8.5m high).
 - A Phosphorus Recovery Building (approximately c.38.5m x c.15.5m x c.20m high).
- Ancillary site development works (pipework and electrical works), plant (new and adjustments to existing) and landscape works (including boundary treatments) to accommodate the above development, including:
 - The use on a permanent basis of a vehicular entrance off Pigeon House Road, and associated landscaping and internal road, along the eastern boundary of the site, previously granted a temporary permission under ABP Ref. 29N.YM0002.
 - A new electrical connection to an existing underground ESB cable, along the southern boundary of the site (at the south west corner only) and at the edge of, and extending to within the South Dublin Bay and River Tolka Estuary SPA.
 - Bypass Culvert, Ultraviolet (UV) Lamps, internal road reconfigurations and additional car parking.
 - The continued use of 2 no. temporary construction compounds (C1 and C2) for the 10 year duration of the permission sought. These compounds were previously permitted under ABP Ref. 29N.YM0004 for a period of 3 years. Proposals for the temporary Construction Compound C1 includes a pedestrian connection to the south-west corner of the Ringsend WwTP. Temporary Construction Compound C1 is partially located within the Poolbeg West Strategic Development Zone as defined by Statutory Instrument No. 279 of 2016. A protected structure (Pigeon House Fort) (RPS No. 6794) is partially located within temporary Construction Compound C2.
- The omission of the permitted 9 km Long Sea Outfall (in tunnel) for the purposes of discharging into the Dublin Bay area from an onshore inlet shaft approximately 350 metres east of the existing Ringsend WwTP (including any associated construction works) which in turn provides for the continued use of the existing outfall to the River Liffey serving the Ringsend WwTP.
- The omission of two no. temporary construction compounds located to the west of the Ringsend WwTP and also the omission of one temporary construction compound on Pigeon House Road to serve the Long Sea Outfall (in tunnel); all of which were previously permitted under ABP Ref. 29N.YA0010.

The overall application site area of the development proposed at the Ringsend WwTP is approximately 17.9 Ha and includes a protected structure (RPS No. 6794).

The overall existing Ringsend WwTP is 14.7 ha and is divided into two sites by Pigeon House Road; 11.2 Ha to the south of the road where the Ringsend WwTP is located, with a further 3.5Ha located to the north of the road.

The 2no. temporary construction compounds which are the subject of this application amount to approximately 3.79 Ha, part of which is located within the 14.7 Ha site of the Ringsend WwTP.

Part of the application site is within the Poolbeg West Strategic Development Zone as defined by Statutory Instrument No. 279 of 2016.

The Ringsend agglomeration including the WwTP has an existing discharge authorisation licence in accordance with the requirements of the Waste Water Discharge (Authorisation) Regulations 2007, as amended. A licence review will be carried out in accordance with the requirements of the licence review process.

These proposals are described in further detail under Section 5 of this Report. In addition, Volume 2, Section 3 of the EIAR: Description of Proposed Upgrade Project, sets out the Proposed Development in the context of the Proposed Upgrade Project.

1.1.1.2 Component 2 - RBSF

Permission is also sought for development of a Regional Biosolids Storage Facility (RBSF) at a separate 11 ha site at Newtown, North Road (R135), Dublin 11 comprising:

- Demolition of existing single storey structures on site comprising of a security kiosk (approx. 22 sq.m gfa), the weighbridge kiosk (approx. 19 sq.m gfa), an ESB Sub-Station (approx. 16 sq.m gfa) and an administration building (approx. 85 sq.m gfa), together with the partial removal of existing internal roads and partial removal / diversion of existing drainage infrastructure as appropriate to accommodate the development.
- Provision of 2no. biosolids storage buildings, each approximately 50m wide, 105m long and 15m in height, including solar panels on the roof of one building. These buildings have a combined capacity to store up to 48,000 cubic metres of biosolids waste at any one time.
- Provision of 4no. odour control units, each with 18.2m high discharge flues.
- Mechanical and electrical control building (approx. 35 sq.m gfa, 4 m high).
- Provision of a single storey site administration building for office, welfare facilities and meeting rooms (approx. 130 sq.m gfa) and associated staff car parking.
- Use of the existing vehicular access off the R135, including provision of new 2.7m high entrance gates to serve the Regional Biosolids Storage Facility.
- Ancillary landscape and site development works, including:
 - Provision of 2no. new weighbridge facilities (1no. weighbridge on entry and exit of the Regional Biosolids Storage Facility).
 - Provision of new ESB Sub-Station (approx. 40 sq.m gfa).
 - Landscaping and boundary treatments, including new 2.7m high boundary to North Road/R135.
 - Provision of fire protection holding tank (approx. 6.7m high).
 - Provision of a HGV cleaning and set down area.
 - Formation of new footpath and landscaped verge to R135 along site frontage.
 - Provision of drainage, water, external lighting, and other utilities.
 - Diversion of 450mm surface water pipe.
 - 1no. signage structure, 5.2m in height erected on posts accommodating 2no. signage zones: 2.4m x 1.7 and 2.4m x 1.2m, located at the site entrance.

The Regional Biosolids Storage Facility will require a Certificate of Registration for the activity of storing biosolids (treated wastewater sludge).

These proposals are described in further detail under Section 5 of this Report. In addition, Volume 2, Section 3 of the EIAR: Description of Proposed Upgrade Project sets out the Proposed Development in the context of the Proposed Upgrade Project.

The lands which the proposed RBSF is situated are currently owned by Fingal County Council. A letter of consent accompanies this application, the details of which are outlined under Section 1.6 of this Planning Report. The lands are also the subject of a separate concurrent application providing for the compulsory purchase of those lands. That Application is entirely separate to this Application under Section 37A of the Planning & Development Act 2000, as amended.

The upgrade of the capacity at the Ringsend WwTP is both a national and regional planning objective. The need for an RBSF arises from the increased capacity of the Ringsend WwTP and the proposed Greater Dublin Drainage (GDD) project.

The lands that are the subject of this Section 37E application are outlined in red on the enclosed Ringsend Site Location Plan, drawing no. Y15710-PL-901, and RBSF Site Location Plan, drawing no. Y17702-PL-002, prepared by the consortium of J.B Barry & Partners, T. J. O'Connor & Associates and Royal HaskoningDHV.

The purpose of this Planning Application Report is to identify to ABP the range of accompanying plans & particulars, pre-planning engagement, the existing site context, relevant planning history, along with the governing policies and objectives for infrastructure of this nature for ease of reference in their assessment of the Proposed Development. The layout of this report provides a clear picture of all the relevant information for the proper consideration of the application, as well as enabling a more informed judgement on the proposal brought forward by Irish Water.

This Report should be read in conjunction with the other plans and particulars accompanying this planning application, including the Planning Drawings, Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS). A complete list of all the plans & particulars are set out in the enclosures list of this Report - Section 16.

1.2 Applicant Details

Irish Water was established as a subsidiary of the Ervia Group (formerly Bord Gáis Éireann). As of the 1st January 2014, pursuant to the Water Services (No.2) Act 2013, Irish Water became responsible for all public water services (i.e. from water source to tap, and the removal and treatment of same) as a national service provider. Alongside this, Irish Water are responsible for the capital investment decisions and delivery of water infrastructure in an economical and efficient manner across the country. In this regard, the responsibility for managing wastewater services provided at the Ringsend WwTP, has been transferred from Dublin City Council to Irish Water.

Registered Name:	Irish Water
Registered Address:	Colvill House, 24-26 Talbot Street, Dublin 1
Company Directors:	Mike Quinn, Jerry Grant, Brendan Murphy, Cathal Marley and Michael G O'Sullivan.
Company Registration No.	530363

In addition, the Ringsend WwTP property has been transferred to Irish Water on the 24th April 2015 under S.I. No. 146/2015 - Water Services (No. 2) Act 2013 (Property Vesting Day) (No. 4) Order 2015 whereby Irish Water is now the responsible entity for the ongoing management and future development of water infrastructure.

1.3 Application Team

The Application has been prepared by an integrated interdisciplinary team led by a consortium of J. B. Barry & Partners, Consulting Engineers, T. J. O'Connor and Associates Consulting Engineers and Royal HaskoningDHV, supported by independent disciplines as follows:-

1. DHI
2. Limnos Environmental Consultants
3. Aquafact, Marine Ecologists

4. Natura Consultants, Terrestrial Ecologists
5. AWN Consulting Engineers, Environmental and Acoustic Advisors
6. Dr. Charles Mount, Heritage Consultant
7. Brady Shipman Martin, Planning and Landscape Specialists
8. Stephen Little & Associates, Town Planning Consultants
9. Dr. Fiona Donnelly, Human Health Specialist

1.4 Application Structure

The proposed application covers a wide range of reports and associated supporting documentation in order to assist ABP in its assessment of the Proposed Development. The structure of the Section 37E Application is as follows:-

- Planning Documents
- Planning Drawings
- Environmental Impact Assessment Report
- Appropriate Assessment Stage 1 Screening & Natura Impact Statement

A complete list of Enclosures accompanying this planning application can be seen at Section 15 of this Planning Report.

The Environmental Impact Assessment Report and Natura Impact Statement are discussed in greater detail at Section 3 and 13 of this Planning Report respectively.

1.5 Planning Application Fee

As outlined in ABP Order dated 21 March 2018, it has been determined that the Proposed Development is considered to be Strategic Infrastructure Development (SID) under the Planning & Development Act 2000, as amended.

In accordance with the prescribed fee for SID applications under the Section 37E of The Act, an EFT has been prepared to the sum of €100,000.00, a copy of the remittance sheet is enclosed with this application.

1.6 Letters of Consent (Land Ownership)

The Proposed Development incorporates lands part owned by Irish Water and under the control of separate land owners and lessees, as follows:

- Dublin City Council – relates to land at the south-east corner of the Ringsend WwTP site, Compound C2, part of Compound C1 and land at the edge of, and extending to within the South Dublin Bay and River Tolka Estuary SPA needed to accommodate works to ESB cables.
- Fingal County Council – relates to the Regional Biosolids Storage Facility site at Newtown, North Road (R135), Dublin 11.
- Dublin Port Company – relates to Compound C1.
- Dublin Waste to Energy Ltd – relates to pedestrian access from Proposed Development Compound C1 and Ringsend WwTP.

The abovementioned letters of consent accompany this planning application.

1.7 Separate Consent Processes

The lands at Newtown, North Road (R135) Dublin 11 are also the subject of a separate concurrent application providing for the compulsory purchase of those lands. That Application is entirely separate to this Application under Section 37A of the Planning & Development Act 2000, as amended.

Additional consents are also required for the proposed project and subsequent operation. The list, in no particular order of priority is as follows:

- For the Ringsend Wastewater Treatment Plant – A review of the existing Wastewater Discharge Licence from the Environmental Protection Agency (EPA) will be required to be carried out by the EPA, once the assessment of this application by ABP is complete.
- For the Regional Biosolids Storage Facility. A Certificate of Registration will be required from the Local Authority.

The SID application process to be conducted by ABP does not grant the above mentioned Licence and Certificate. Other licenses beyond the proposed planning application may also include Fire Certificate, BCAR etc.

1.8 Planning & Development Regulations 2001, as amended

As part of the SID planning process, Irish Water has engaged in consultation with ABP in accordance with Section 37B of the Planning & Development (Strategic Development) Act 2006 (as amended). As part of the final pre-planning meeting, ABP Staff confirmed that the records of these meeting minutes are available at the Bord's offices during its public opening hours and available online on their website. In addition, Irish Water has engaged in pre-planning discussions with Dublin City Council and Fingal County Council. Details in relation to pre-planning meetings are outlined under Section 6 of this Planning Report.

On the 14 February 2018, Stephen Little & Associates wrote to ABP, on behalf of Irish Water, to formally close the pre-planning consultation phase. On the 21 March 2018, ABP concurred with the recommendation of their Inspector's Recommendation which outlined that the Proposed Development is Strategic Infrastructure Development.

As per the requirements of the Act, Irish Water has now proceeded to lodge this application for the Proposed Development outlined in the public notices, as per the accompanying drawings.

In addition, a list of the prescribed bodies to be notified of this application formed part of the decision confirming the Proposed Development is SID. We further confirm that we have issued notice and copies of the application to each of these bodies.

The list of the prescribed bodies notified and a copy of the letter sent to each body, with a copy of the application can be found at planning application documentation.

In terms of validation requirements for plans and particulars, there is no specific provision under this Section of the Act or the Planning and Development Regulations 2001, as amended (The Regulations). However, as set out in the end note of the Strategic Infrastructure planning application form, the General Guidance Note states:

"The range and format of material required to be compiled/submitted with any application in respect of a proposed strategic infrastructure development shall generally accord with the requirements for a planning application as set out in the Planning and Development Regulations, 2000 to 2011 and those Regulations should therefore be consulted prior to submission of any application."

In this regard, the drawings enclosed with this application have been screened with reference to The Regulations and are consistent with the spirit and intent of same.

In terms of Public Notices, a copy of the newspaper notices (1no. National Paper: Irish Independent and 1no. Local Paper for Dublin City & Fingal – The Herald) is enclosed. The Site Notice is erected on a white background at the Ringsend Wastewater Treatment Plant, Pigeon House Road, Dublin 4 and at Newtown, North Road (R135), Dublin 11. A copy of these Notices are also enclosed.

In terms of Ringsend WwTP, the site notices have been erected at the following locations: -

1. The main WwTP site entrance
2. The Storm Tanks site entrance.
3. The proposed main construction compound site entrance.
4. The south east corner of the proposed main compound.
5. The south east WwTP site entrance/spur road.
6. The WwTP maintenance entrance.

For Newtown, North Road (R135), Dublin 11, the site notices are erected at the following locations:-

1. The site entrance.
2. The site boundary closest to the nearest residence.

The location of site notices are illustrated on the accompanying Site Location Drawings prepared by the consortium of JB Barry & Partners, Consulting Engineers, TJ O'Connor and Associates, Consulting Engineers and Royal HaskoningDHV:

- Ringsend Wastewater Treatment Plant – drwg no. Y15710-PL-901
- Regional Biosolids Storage Facility – drwg no. Y17702-PL-002

1.9 Pre-Planning Consultation with An Bord Pleanála

In line with the requirements of the Act, Irish Water has held a number of pre-planning consultations with ABP. The details of these consultations are set out below:-

Table 1: Dates of pre-application meetings held with An Bord Pleanála

Name of Consultee	Date
An Bord Pleanála – Meeting No. 1	22 nd September 2015
An Bord Pleanála – Meeting No. 2	9 th December 2015
An Bord Pleanála – Meeting No. 3	16 th February 2016
An Bord Pleanála – Meeting No. 4	22 nd July 2016
An Bord Pleanála – Meeting No. 5	15 th December 2016
An Bord Pleanála – Meeting No. 6	15 th March 2017
An Bord Pleanála – Meeting No. 7	2 nd June 2017
An Bord Pleanála – Meeting No. 8	21 st September 2017
An Bord Pleanála – Meeting No. 9	30 th January 2018

In line with the application requirements for SID projects, copies of the Minutes of these Meetings prepared by ABP are available at ABP's offices for inspection, during its public opening hours and available online on their website.

Details in relation to pre-planning meetings are outlined under Section 7 of this Planning Report.

At the conclusion of this consultation ABP wrote to Irish Water and confirmed that the project amounted to Strategic Infrastructure and that the application should be made under Section 37A of the Planning & Development Act 2000, as amended.

1.10 Website

In line with the application requirements for SID projects, Irish Water has created a website for the purposes of enabling the public to view the plans & particulars of the planning application.

The website is: www.ringsendwwtpupgrade.ie

This website contains a complete set of the plans and particulars submitted with this planning application and is structured, as follows:-

- Statutory (containing Application form and notices)
- Planning (containing Planning Report and Drawings)
- Environmental (Containing Appropriate Assessment Stage 1 Screening & Natura Impact Statement, EIAR Written Statement, Appendices and A3 sized planning drawings)

2 RATIONALE FOR THE PROPOSED DEVELOPMENT

2.1 Statement of Need

2.1.1 WwTP Component

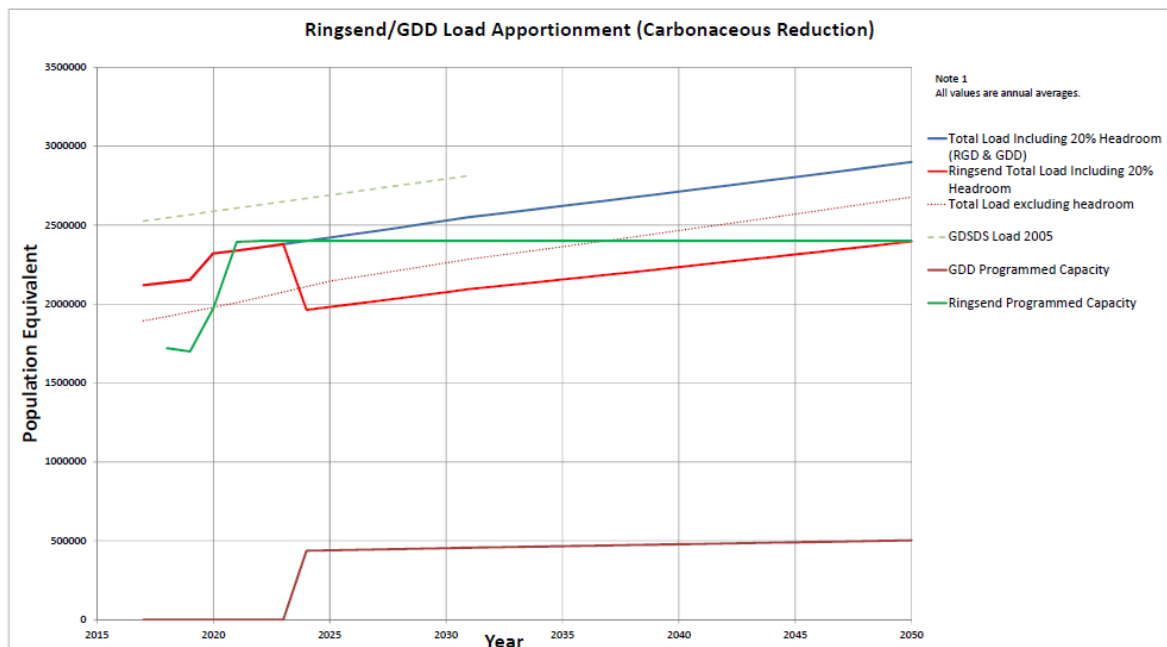
The need for additional wastewater treatment capacity to serve the Greater Dublin region was identified in the *Greater Dublin Strategic Drainage Study (GSDSDS¹)*. This study set out a vision for the future management of wastewater within the Greater Dublin region, and was subsequently the subject of a Strategic Environmental Assessment (SEA) in 2008, following which it was incorporated into Development Plans.

To cater for growth in both the medium and long term, the GSDSDS study made recommendations on wastewater infrastructure which included the optimisation of the capacity of existing WWTPs together with the provision of new infrastructure. For the Ringsend WwTP the achievable capacity within the confines of its current site is 2.4 million PE and Irish Water is proposing to upgrade the current WwTP to achieve this capacity. Irish Water is separately progressing other projects which include the provision of a new wastewater treatment facility in north Dublin - the Greater Dublin Drainage (GDD) Project, together with alterations to the drainage network to facilitate the required diversion of flows from the Ringsend catchment.

In 2017 Irish Water carried out a review of current loadings on WwTPs in Greater Dublin as well as future growth in the region. This document titled Greater Dublin Drainage Strategy; Overview & future Strategic Needs (GDDS) (May, 2018) is enclosed with this planning application for further information. This review examined 2016 Census data, CSO Regional Population Projections and a Demographic Study carried out in 2014 by Irish Water as part of the Water Supply Eastern and Midlands Region Project. In particular, it provides updated projections for the 12 years' passage of time and extended the design horizon from 2031 to 2050.

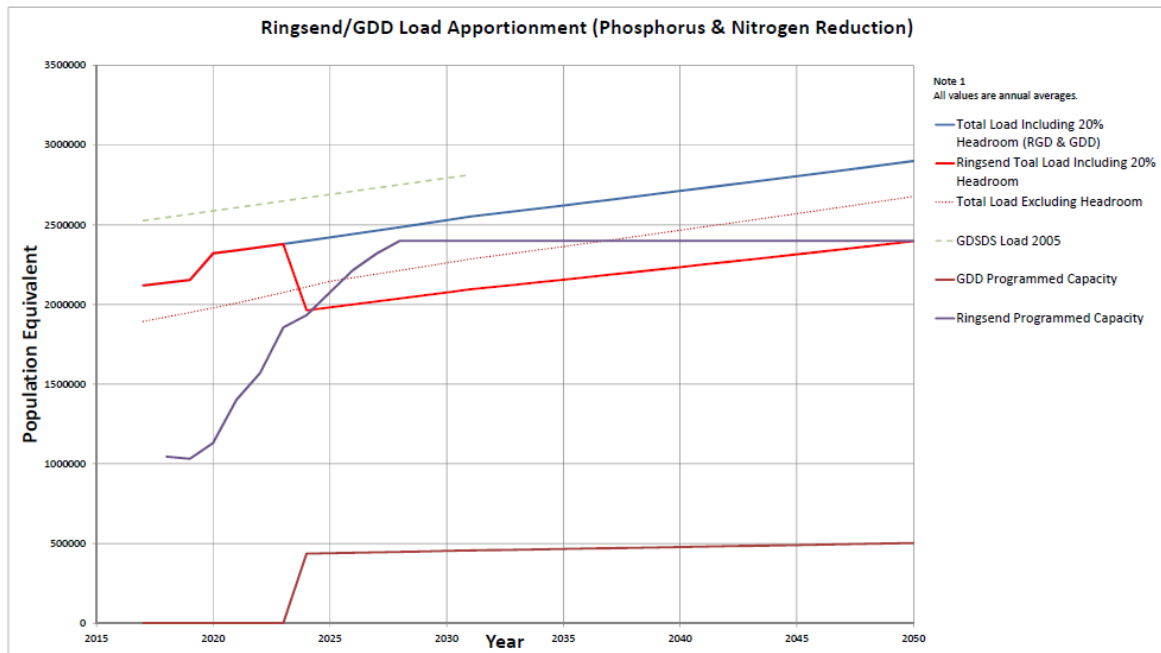
The GDDS report formed the basis for the most likely projected growth scenario within the Ringsend catchment, which is anticipated to be in region of 2.712m PE by the 2040 design horizon. This growth scenario provides a 20% allowance for headroom for industrial/domestic growth.

Figure 2: Historic and Projected Loadings for the Ringsend Catchment (Carbonaceous Reduction)



¹ This study is available online <http://www.greaterdublindrainage.com/gdsds/>

Figure 3: Historic and Projected Loadings for the Ringsend Catchment (Phosphorus & Nitrogen Reduction)



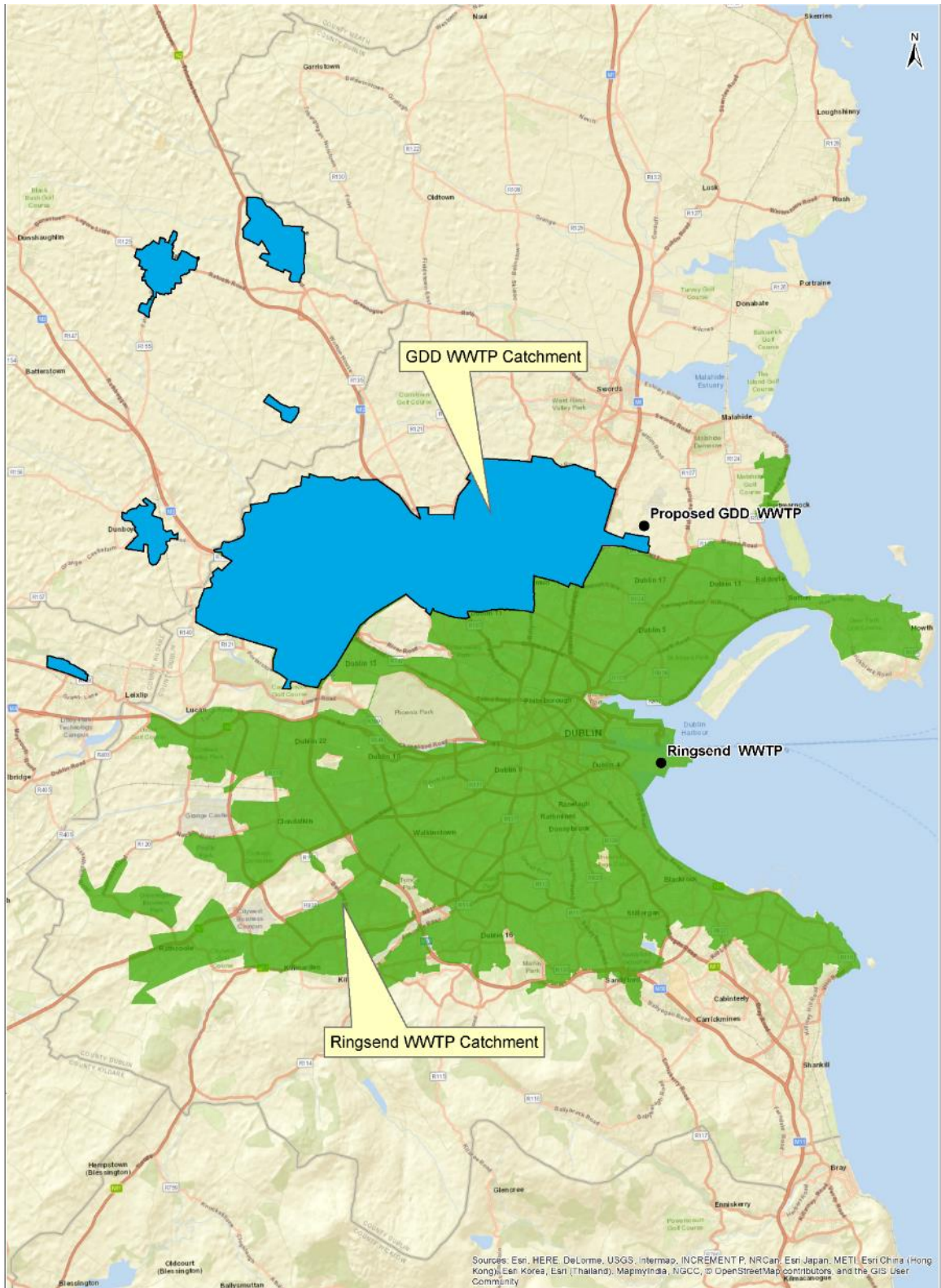
The projected loadings for the Ringsend catchment together with the required additional capacity are shown in Figure 2. The programmed capacity for the Ringsend WwTP (Ringsend Programmed Capacity) is denoted by a green line in this graph. This shows an increase in the projected capacity following the completion of the capacity upgrade by 2021. At this stage, there will be a greater capacity in terms of reduction of BOD and SS. It is expected to be 2.4m PE.

There is a proposed follow-on a programme of retrofitting new technology until 2028 to meet nitrogen (N) and phosphorus (P) emission limit values, which is the subject of this planning application. Figure 3 is provided to illustrate the programmed capacity for phosphorus and nitrogen at the Ringsend WwTP (purple line on the graph). It is expected that the treatment capacity of 2.4m PE in terms of P and N will be achieved by 2028.

The Applicant is investigating the options of providing increased capacity by enhancing the treatment capability of the existing SBRs along with the use of an AGS Hybrid solution so that the 2.4M pe capacity for TN and TP can be realised sooner. This work is at an early stage at present therefore for the purpose of this report the programme for full AGS retrofit is being used.

The loadings on the Ringsend catchment are projected to reach approximately 2.4 million PE by 2024 to 2027 depending on the actual growth realised in the catchment. As well as the development of the treatment plant at Ringsend, Irish Water is separately progressing other projects for the provision of a the GDD wastewater treatment facility in North County Dublin together with alterations to the drainage network to facilitate the required diversion of flows from the Ringsend catchment. The additional capacity is expected to be constructed by 2024 together with provisions for intercepting the Blanchardstown Catchment (9C) and part of the North Fringe (NF) Catchment and transferring these flows to the new WwTP. This proposed division of the catchment is shown in Figure 4.

Figure 4: Future Ringsend WwTP and GDD Catchments



In 2001, the Lower Liffey Estuary was designated a 'sensitive area' under the Urban Waste Water Treatment Directive 91/271/EEC of 27 May 1991, (UWWTD). This designation was of major significance for Ringsend WwTP, requiring the removal of nutrients from the treated effluent before discharge to the Lower Liffey Estuary.

In 2010, a discharge authorisation licence (D0034-01) was granted by the EPA for the Ringsend WwTP, which applies Emission Limit Values (ELV) of 10 mg/l and 1 mg/l in respect of Total N (nitrogen) and Total P (phosphorus). The Ringsend WwTP does not currently possess the necessary nutrient reduction treatment facilities to achieve these standards. The level of treatment will be increased to a higher standard (specifically involving nutrient reduction) utilising AGS technology and phosphorous reduction, to ensure that the effluent complies with the required standards.

The Ringsend WwTP is currently overloaded and there is a requirement to provide for the future growth in demand arising from the connected catchment. The Proposed Upgrade Project (being the 2012 Approval amended by the Proposed Development) will increase the treatment capacity of the plant from 1.64 million PE at present to the proposed 2.4 million PE while continuing to discharge from the existing outfall pipe through the use of AGS technology. The design also provides for the technology and infrastructure required so that the level of treatment will be increased to a higher standard (specifically involving nutrient reduction) to comply with the UWWTD and to achieve the emission limit values as set out in Schedule A of the EPA discharge licence.

As noted above, the Proposed Upgrade Project is also a core pillar of a wider strategy for wastewater treatment facilities in the Greater Dublin Area, as outlined in the 'Greater Dublin Strategic Drainage Study' (GSDSDS). This study recommended that the Ringsend WwTP be expanded to the maximum capacity achievable at the existing site. When, at a future date, the load at Ringsend WwTP approaches its maximum capacity, it is proposed that flows will be diverted from the northern part of the Ringsend catchment to a new Regional WwTP in North Dublin, now designated as the Greater Dublin Drainage (GDD) project. Such diversions are envisaged at discrete intervals over an extended timescale (with the first diversion expected to arise in the mid 2020's).

This strategy ensures that the design of Ringsend is to its capacity within the confines of the site and that the spare treatment capacity, which is dictated by the load at the time based on growth and the development of the GDD allows for future development in, and intensification of, the core city area.

The Proposed Upgrade Project would enable the upgraded WwTP to meet the level of treatment required by the UWWTD and to achieve the emission limit values as set out in Schedule A of the EPA discharge licence.

2.1.2 RBSF Component

The *National Wastewater Sludge Management Plan* (NWSMP), published by Irish Water in 2016, sets out Irish Water's strategy for managing wastewater sludge (the generation of which is an inevitable result of the operation of WwTPs) over the next 25 years. The NWSMP considers all aspects of wastewater sludge management, including treatment, transport, storage and reuse/disposal. The NWSMP identifies reuse of treated wastewater sludges (biosolids) on agricultural land (under nutrient management plans) as the preferred outlet in the short to medium term.

However, there are constraints on land spreading (15th October to 12th January) due to seasonal factors and as such the biosolids must be stored during the winter and summer months. The development of regional facilities for the storage of biosolids from wastewater treatment plants is recommended in the NWSMP. In line with the adopted strategy, a new Regional Biosolids Storage Facility (RBSF) is proposed as part of the Ringsend WwTP Upgrade Project. Following a non-statutory consultation process conducted in 2017 it is proposed to locate the RBSF in Newtown, Dublin 11. The purpose of the RBSF is to store treated biosolids that will be produced at the Ringsend WwTP and the proposed WwTP for North County Dublin (the Greater Dublin Drainage (GDD) Project). No treatment of the biosolids will take place at the proposed RBSF.

2.2 Ringsend WwTP - Background

Ringsend WwTP has been the hub of wastewater treatment for the Dublin area since 1906 and various extensions and upgrade projects have taken place in the intervening period. The overriding purpose of the Proposed Upgrade Project is to extend capacity of the existing treatment works to the maximum achievable, within the existing site, as set out in the Greater Dublin Strategic Drainage Study (GSDSDS), published in 2005. This is required to help facilitate urban growth within the Dublin area. Also, under the UWWTD and related Irish Regulations (S.I.No. 254 of 2001) in which the Lower Liffey Estuary is designated as a 'sensitive' water body, nutrient (nitrogen and phosphorus) reduction is required for existing and future loads to discharge to this water body at the plant's existing outfall location and comply with the limits set by the UWWTD and the related Irish Regulations.

An EPA Wastewater Discharge Licence, which encompasses the requirements of this legislation, was granted by the EPA to Dublin City Council on 27 July 2010 (EPA License Register D0034-01) to discharge treated wastewater effluent to the Lower Liffey Estuary. Currently the WwTP is not in compliance with the UWWTD or with the prescribed EPA emission levels. Delivery of the Proposed Upgrade Project as per this planning application will ensure compliance with the limits of the UWWTD.

As set out under Section 2.1.1 of this report, the need for additional wastewater treatment capacity is identified in the GSDSDS. To cater for growth in both the medium and long term, the GSDSDS study made recommendations on wastewater infrastructure which included the optimisation of the capacity of existing WwTPs together with the provision of new infrastructure. For the Ringsend WwTP the feasible capacity² within the confines of its current site is 2.4 million PE. For loadings in excess of 2.4 million PE, new wastewater treatment facilities are required. Irish Water is separately progressing other projects which include the provision of a new wastewater treatment facility in north Dublin together with alterations to the drainage network to facilitate the required diversion of certain flows from the Ringsend catchment. The proposed new facilities are to be located in North Dublin. These are referred to as the Greater Dublin Drainage (GDD) scheme is also being separately progressed by Irish Water and were also a key recommendation of the GSDSDS.

Since the 2012 Approval, a number of project circumstances have changed. The structure and process in which wastewater services is governed and invested has changed. As of 1st January 2014, pursuant to the Water Services (No.2) Act 2013, Irish Water became responsible for all public water services (i.e. from water source to tap, and the removal and treatment of same) as a national service provider. Alongside this, capital investment decisions and the implementation of a capital programme in an economical and efficient manner across the country is now undertaken by Irish Water. In this context, the responsibility for providing, managing and developing wastewater services for the Greater Dublin Strategic Drainage area and particularly the Ringsend WwTP, rests with Irish Water.

In 2017, Irish Water carried out an internal company review of the GSDSDS having regard for the current loadings on WwTPs in the Greater Dublin region as well as updated future growth projections in the region. The findings of the review are outlined in the Irish Water document - *Greater Dublin Drainage Strategy Overview & future Strategic Needs* (May, 2018) which accompanies this application. The review examined 2016 Census data, CSO Regional Population Projections and a Demographic Study carried out in 2014 by Irish Water as a part of the Water Supply Eastern and Midlands Region Project. In particular it provides an Irish Water Internal review to the GSDSDS projections for the 12 year's passage of time and extended the design horizon from 2031 to 2050. The 2017 review formed the basis for the most likely projected growth scenario within the Ringsend catchment, which is anticipated to be in the region of 2.712m PE by the 2040 design horizon. This growth scenario provides a 20% allowance for headroom for growth which may be disproportional to the most likely scenario.

² The capacity is expressed as an annual average daily capacity and the plant will be designed to cater for significant daily, weekly and seasonal variations outside of this value.

Accordingly, Irish Water is continuing to progress plans for the Greater Dublin Drainage (GDD) WwTP in North Dublin in accordance with the recommendations of the GSDS. It is intended that the additional capacity will be constructed at GDD by the middle of the 2020's, together with provisions for intercepting the Blanchardstown Catchment (9C) and part of the North Fringe Catchment and transferring these flows to the new WwTP.

Dublin City Council applied for permission for development comprising the expansion of the Ringsend WwTP in April 2012. In November 2012, ABP granted permission for the development, subject to 16no. conditions (the 2012 Approval) – Further details are outlined under Section 10 of this Report, entitled 'Planning History'.

At the time of the 2012 application, Dublin City Council determined that the existing outfall serving the Ringsend WwTP would be required to be re-located to a point outside the area subject to the 'sensitive area' designation. The Local Authority conducted studies from 2008 to address the overloading and 'nutrient-sensitive' designation issues. From these studies, the most appropriate design at the time was to re-locate the existing outfall. This option, known commonly as the Long Sea Outfall Tunnel (LSOT), was deemed at that time to be the most appropriate way to achieve compliance with the requirements of the EPA licence and the UWWTD.

Since 2008, when the studies in support of the 2012 Application were commenced, advanced nutrient removal technologies have emerged, particularly in the last decade, which were not available at the time of the 2012 Approval. An examination of these technologies was carried out by Irish Water as part of a study into the most efficient delivery of wastewater infrastructure at the Ringsend WwTP. One relatively new technology, described as Aerobic Granular Sludge³ (AGS) comprises an enhanced biomass which enables a higher quality treatment. The biomass granules from the AGS process undertake a biological nutrient removal process as part of its normal treatment cycle. AGS enables treatment of wastewater to a higher standard and simultaneously achieves reduction of Nitrogen and Phosphorus to the required standards. This process is currently implemented successfully at a number of municipal treatment plants worldwide and has now been proven at a sufficiently large scale to be considered for the Ringsend WwTP.

Furthermore, a programme of 'process proving' has been successfully undertaken by Irish Water to test the AGS technology in real life environmental conditions prevailing at Ringsend. This period of 'process proving' was undertaken in order to provide a more robust verification of the AGS process in achieving the licence limits in schedule A of the EPA discharge licence. This 'process proving' has demonstrated the suitability of AGS for the particular treatment requirements at Ringsend WwTP. The use of this AGS technology (with associated nitrogen and phosphorous removal) means there is no longer a need to relocate the existing outfall to comply with the parameters of the UWWTD. As a result, the LSOT is no longer required. Further details of this 'process proving' programme can be found in Volume 2, Section 4 of the EIAR.

Earlier reports and Development Plans have referred to a "firm" capacity of 2.1m PE, which relates to the capacity when the largest unit is out of service for repair or maintenance. At the time, it was envisaged that up to four secondary treatment tanks (or Sequencing Batch Reactors [SBR]) would have to be taken out of service at one time. However, the design currently proposed will allow single tanks to be taken out of service, meaning that the "firm" capacity is closer to the full capacity of 2.4m PE, especially considering that:

- The technology now available is superior to what could be considered in the reports accompanying the 2012 Approval, with AGS treatment technologies allowing greater treatment potential in the existing tank volumes,
- The capacity is expressed as an annual average capacity and the plant will be designed to cater for significant daily, weekly and seasonal variations outside of this value, and
- The required provision of headroom in the determination of required capacity encompasses resilience to cater for breakdown.

³ We refer to Volume 2, Part B – Appendix 4B / Capability Statement, Nereda; Worldwide Nereda Variants and Applications.

As a result of the above, reference throughout the remainder of this Planning Application Report and the accompanying EIAR will include references to the Proposed Upgrade Project having a capacity of 2.4m pe.

The use of this AGS technology (with associated nitrogen and phosphorous removal) means there is no longer a need to relocate the existing outfall to comply with the parameters of the UWWTD. As a result, the LSOT is no longer required.

2.3 Regional Biosolids Storage Facility - Background

2.3.1 Sludge Generation from Wastewater Treatment Plants

The treatment of wastewater results in the production of two types of raw sludge which require treatment and processing, namely:

1. Primary Sludge (PS) – solids removed in the primary settlement tanks
2. Surplus Activated Sludge (SAS) or, in the case of the Aerobic Granular Sludge technology, Surplus Aerobic Granular Sludge (SAGS) – growth in sludge biomass arising from biological treatment

These two raw sludge types produced in wastewater treatment are distinct from the biosolids products that result from the subsequent sludge treatment processes. Presently there are two biosolids products, as follows:

- Biocake – treated sludge with a dry solids content of circa 26%.
- Biofert – treated sludge which is thermally dried and has a dry solids content in excess of 90%.

Biosolids are defined in the Code of Good Practice for the Use of Biosolids in Agriculture (1999) as:

"the organic by-product of urban wastewater treatment which, by being treated to an approved standard, can be used beneficially as a fertiliser/soil conditioner in agriculture".

Following the Proposed Upgrade Project and the introduction of a phosphorus recovery process, it will be possible to recover nutrients required for growth. This third⁴ biosolids material can also be called struvite. The production of struvite is discussed in Section 5.2.1 and Section 5.2.2 of this Report.

All material produced from the wastewater treatment process is classified as a waste and the outputs are managed as such: e.g. treated wastewater is discharged to the environment under authorisation of the EPA, whilst the biosolids are managed to land using Nutrient Management Plans approved by local authorities.

The quantity of sludge generated is directly related to both the influent loading, and the wastewater treatment processes utilised. The estimated current average daily sludge production is 55 tonnes dry solids of PS and 52 tonnes dry solids of SAS. However, it should be noted that these figures are averages and that solids loads vary considerably about the mean values. Maximum values are of the order of 1.4 times the average and occur over 1 week per month.

2.3.2 Regional Biosolids Storage Facility

The purpose of the RBSF is to store treated biosolids that will be produced at the Ringsend WwTP and the proposed WwTP for North County Dublin (the Greater Dublin Drainage (GDD) Project). No treatment of the biosolids will take place at the proposed RBSF.

The production of biosolids is a normal part of the municipal wastewater treatment process. The proposed facility will be used solely for storage purposes. No treatment of the biosolids will take place at the facility. Section 3, Volume 2 of the EIAR discusses the various forms of biosolids and

⁴ *Biosolids are described in the Code of Good Practice for the Use of Biosolids in Agriculture (1999) as rich in "macro and micro nutrients required for healthy plant and animal growth. It contains Nitrogen, Phosphorus and Potassium. It can also provide Magnesium...."*

the quantities involved for Ringsend WwTP while a full examination of the design rationale is contained in the RBSF Engineer's Report which accompanies this application.

As part of the screening and scoping exercise for the preparation of the EIAR required in this case, an examination of cumulative and indirect effects was undertaken. This scoping exercise was informed by two recent High Court judgments, (*O'Grianna vs An Bord Pleanála*, [2014 IEHC 632] and *Edenderry Power Limited*, [2014 No. 38 J.R.]) which relate to the consideration of cumulative environmental impacts as part of the overall assessment of a project. In both decisions, it can be concluded that when elements that are crucial to or integrated into a project, they need to be examined and should form part of the overall EIA process.

As the infrastructure for storing biosolids as a by-product of the wastewater treatment process is directly linked to the wastewater treatment process itself, the biosolids storage facility is included as part of this overall development. It is also considered as part of the EIAR so that a holistic assessment of all components of the project is facilitated. The RBSF will also form part of the planning application for GDD in due course. The RBSF is therefore considered as part of the EIAR for the Ringsend WwTP Upgrade Project and also, separately, the EIAR for the GDD project.

3 ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR)

3.1 Background to EIA

In 2012, both an EIA and an AA were undertaken by ABP of the existing and approved development prior to making its decision to approve this project. Under the 2012 Approval, Irish Water currently have ABP consent to upgrade the Ringsend WwTP to a 2.4m PE capacity in a manner which requires the provision of the Long Sea Outfall Tunnel. However, by utilising AGS technology it is now possible to omit the Long Sea Outfall Tunnel and continue to discharge the final effluent at the current location on the Lower Liffey Estuary.

Following pre-planning discussions between ABP and Irish Water, it has been agreed that this proposed amendment to the 2012 Approval must be the subject of a new project-specific EIA and AA before a decision on development consent may be made.

The screening and scoping exercises undertaken in the preparation of the EIAR accompanying this planning application was informed by two recent High Court judgments, (O’Grianna vs An Bord Pleanála, [2014 IEHC 632] and Edenderry Power Limited, [2014 No. 38 J.R.]) which relate to the consideration of cumulative environmental impacts as part of the overall assessment of a project. In both decisions, the judgements confirmed that integral elements of a project must be examined as part of the EIA process.

A by-product of the wastewater treatment process is the creation of biosolids. In the case of Ringsend WwTP, biosolids are currently produced in two forms, referred to as Biocake and Biofert. These biosolids form a normal part of wastewater treatment and are recovered through the spreading on agricultural lands, at specified times of the year. Outside of these times, the biosolids are stored. It was determined that the storage of biosolids produced by the Ringsend WwTP is integral to the overall Proposed Upgrade Project. The implications of these judgements for the Ringsend WwTP Upgrade Project require the inclusion of a biosolids storage facility, known as Regional Biosolids Storage Facility (RBSF) within this planning application.

Further detail on the requirements of EIA and the EIA Process is provided in the EIAR under Volume 2, Section 2: The EIA Process.

3.2 Scope of EIAR

The EIAR being submitted with this planning application considers the impact of the overall Proposed Upgrade Project and not simply the works for which permission is now being sought at Ringsend WwTP.

The scope of the EIAR comprises the works and activities associated with the Proposed Development, for which permission is being sought and described in section 1.2.2 above, together with the development works (the common elements, see Table 8) that will be progressed from the 2012 Approval and the proposed omission of the LSOT. The proposals for a Regional Biosolids Storage Facility at Newtown, Dublin 11 are also considered in the EIAR. This approach results from pre-application consultation with ABP.

Therefore, when referring to the proposed works it is important at this stage to clearly define the project for the purposes and scope of this EIAR.

- **Proposed Upgrade Project** - The term ‘Proposed Upgrade Project’ refers to the elements of the 2012 Approval being progressed and the Proposed Development being applied for under Section 37E.

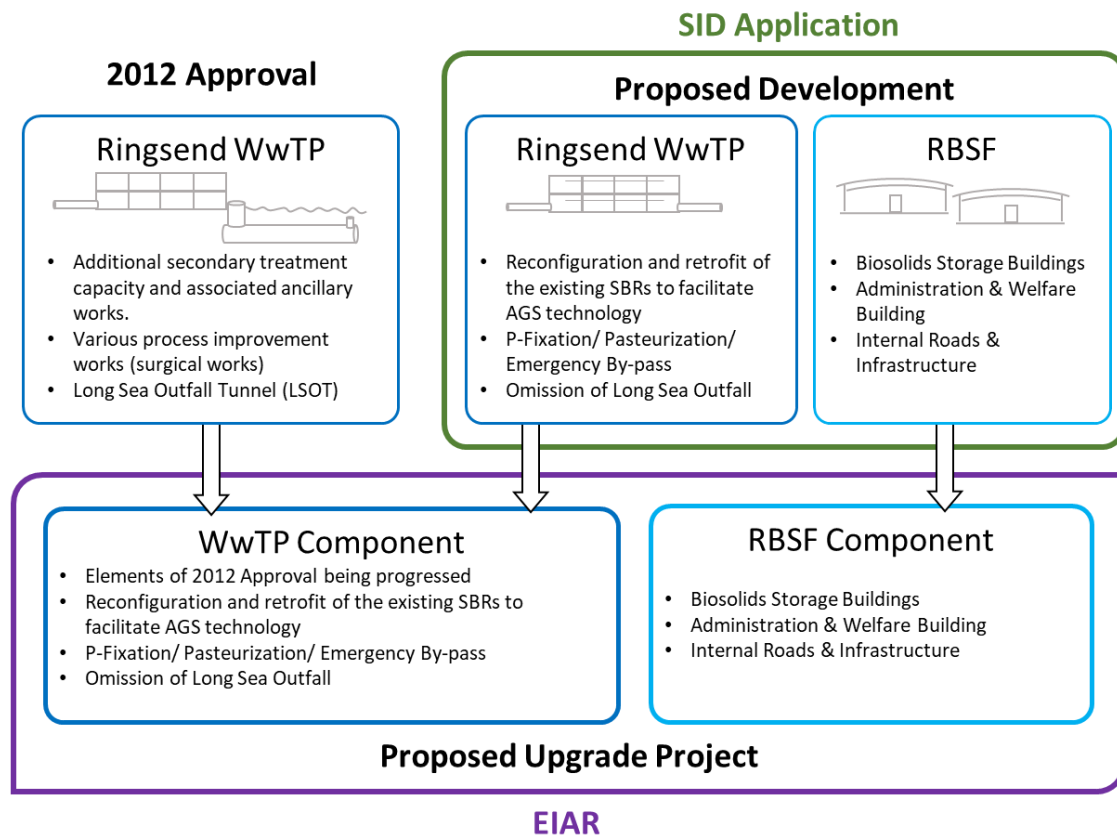
The Proposed Upgrade Project consists of two components as follows:

- **WwTP Component** - The term ‘WwTP component’ is used to refer to works and activities associated with the Ringsend WwTP as described in Section 5 below. Volume 3 of this EIAR focuses on the WwTP component.
- **RBSF Component** - The term ‘RBSF component’ is used to refer to all works associated with the proposed Regional Biosolids Storage Facility at Newtown Dublin 11, as described in Section

5 below. Volume 4 of this EIAR focuses on this RBSF component.

Figure 5 below provides a schematic that illustrates the 2012 Approval, the new development proposals for Ringsend WwTP and RBSF, and these proposals in the context of this EIAR.

Figure 5: The Proposed Development in the context of the 2012 Approval and Proposed Upgrade Project.



In addition, Section 37E of The Act outlines that an EIAR (formerly an EIS) shall accompany any application made under the provisions of the Act for the purposes of Strategic Infrastructure Development (SID). The submitted EIAR is set out in Volumes 1 – 5 and forms part of the Environmental Impact Assessment (EIA) process to be undertaken by ABP, as the competent authority in this case.

The steps taken in the preparation of the EIAR are outlined under Volume 2, Section 2: EIA Process, of the accompanying EIAR.

In this particular instance, Approval for development has been obtained since 2012 and what is now being proposed amounts to revisions and alterations to the 2012 Approval.

In this context, the EIAR assesses the impact of the *'Proposed Upgrade Project'* being the existing 2012 Approval, as revised and altered by the *'Proposed Development'* for which Permission under Section 37E is being sought in this case. This is the approach that was discussed and agreed with ABP during pre-planning consultations.

Throughout the remainder of this document we have sought to clearly identify those works for which permission is now being sought; *'Proposed Development'* and the details of the *'Proposed Upgrade Project'* which is the subject of the EIAR, whilst at the same time providing ABP with details of both.

3.3 Structure of EIAR

This EIAR has been completed in accordance with the requirements as set out in the EIA Directive, (2014/52/EU) and relevant guidelines and documentation, including:

- Draft Guidelines on the Information to be contained in Environmental Impact Statements (EPA, 2017)
- Advice Notes for Preparing Environmental Impact Statements Draft (EPA, 2015)
- Guidance on the preparation of Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52EU) (EU, 2017)
- Circular PL 1/2017 - Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive)
- Circular PL 8/2017 - Implementation of Directive 2014/52/EU - Advice on Electronic Notification Requirements

The EIAR for Ringsend Wastewater Treatment Plant Upgrade Project comprises five volumes:

Table 2: Structure of EIAR

EIAR Structure	
Volume 1	EIAR - Non-technical Summary
Volume 2	EIAR - Written Statement – Introduction, EIA Process, Proposed Scheme, Consideration of Alternatives
Volume 3	EIAR - Written Statement – Ringsend WwTP Environmental Topics, including Appendices
Volume 4	EIAR - Written Statement – RBSF Environmental Topics, including Appendices
Volume 5	Drawings (A3 size) for Ringsend WwTP and the RBSF

The Proposed Development put forward for consideration has been informed by extensive pre-application consultation. This included: the pre-application discussions with ABP, Dublin City Council, Fingal County Council, Prescribed Bodies & Stakeholders and general members of the public outlined under Section 7 of this report. Regard has been had to the information contained in the submissions, comments and suggestions received and have been considered in the preparation of the EIAR.

The following environmental topics are examined within the EIAR:-

- Planning & Policy Context
- Population and Human Health
- Water
- Biodiversity – Marine
- Biodiversity – Terrestrial
- Land and Soils;
- Air and Climate
- Noise and Vibration
- Odour
- Cultural Heritage
- Material Assets;
- Traffic, and
- Landscape

The proposed mitigation measures for the Proposed Upgrade Project are set out in detail under each environmental topics. For the purposes of ABP's assessment, the proposed measures are summarised under Section 17 within Volume 3 & 4 of the EIAR.

The residual impacts of the Proposed Upgrade Project are set out in detail under each environmental topics. For the purposes of ABP's assessment, the predicted impacts are summarised under Section 18 within Volume 3 and 4 of the EIAR.

The drawings contained in Volume 5 of the EIAR are at A3 size. A full suite of these planning drawings at A1/A0 size also accompany this planning application.

The accompanying EIAR has set out the impacts of the Proposed Upgrade Project. In line with the proposed components of the scheme, it is predicted that there are no significant long-term adverse impacts.

3.4 EIAR Team

Article 5(3)(a) of amended EIA Directive (2014/52/EU) (EIA Directive) states that "the developer shall ensure that the environmental impact assessment report is prepared by competent experts". The Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports issued by the EPA in August 2017 highlights the need for competent experts to be involved in the EIA process and in the preparation of the EIAR.

The EIAR for this project has been prepared by a consortium of J. B. Barry & Partners, T. J. O'Connor & Associates and Royal HaskoningDHV with additional specialist input provided by consultants across a variety of disciplines. Responsibility for individual sections of the EIAR is as listed in Table 3 below. A list of experts who have contributed to this EIAR, their qualifications, experience and any other relevant credentials is provided in Appendix 1A of the EIAR.

Table 3: EIAR Sections and Competent Experts

EIAR Section	Consultant
Non-Technical Summary	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Introduction	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
EIA Process	Stephen Little & Associates
Existing Environment	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
The Proposed Scheme	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Consideration of Alternatives	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Planning and Policy Context	Stephen Little & Associates
Population	Stephen Little & Associates
Water	J.B. Barry, DHI & LIMNOS
Biodiversity - Marine	Aquafact Environmental Consultants
Biodiversity - Terrestrial	Natura Environmental Consultants
Land & Soils	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Air	AWN Consulting
Noise & Vibration	AWN Consulting

EIAR Section	Consultant
Odour	Royal HaskoningDHV
Climate	AWN Consulting
Cultural Heritage	Dr. Charles Mount
Material Assets	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Traffic	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Landscape	Brady Shipman Martin Macro Work*
Human Health	Dr. Fiona Donnelly
Environmental Interactions	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Summary of Mitigation	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Summary of Residual Impacts	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Risk	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV
Overall Co-ordination and Management of the EIAR	J.B. Barry/T.J. O'Connor/Royal HaskoningDHV

* For glint and glare assessment only

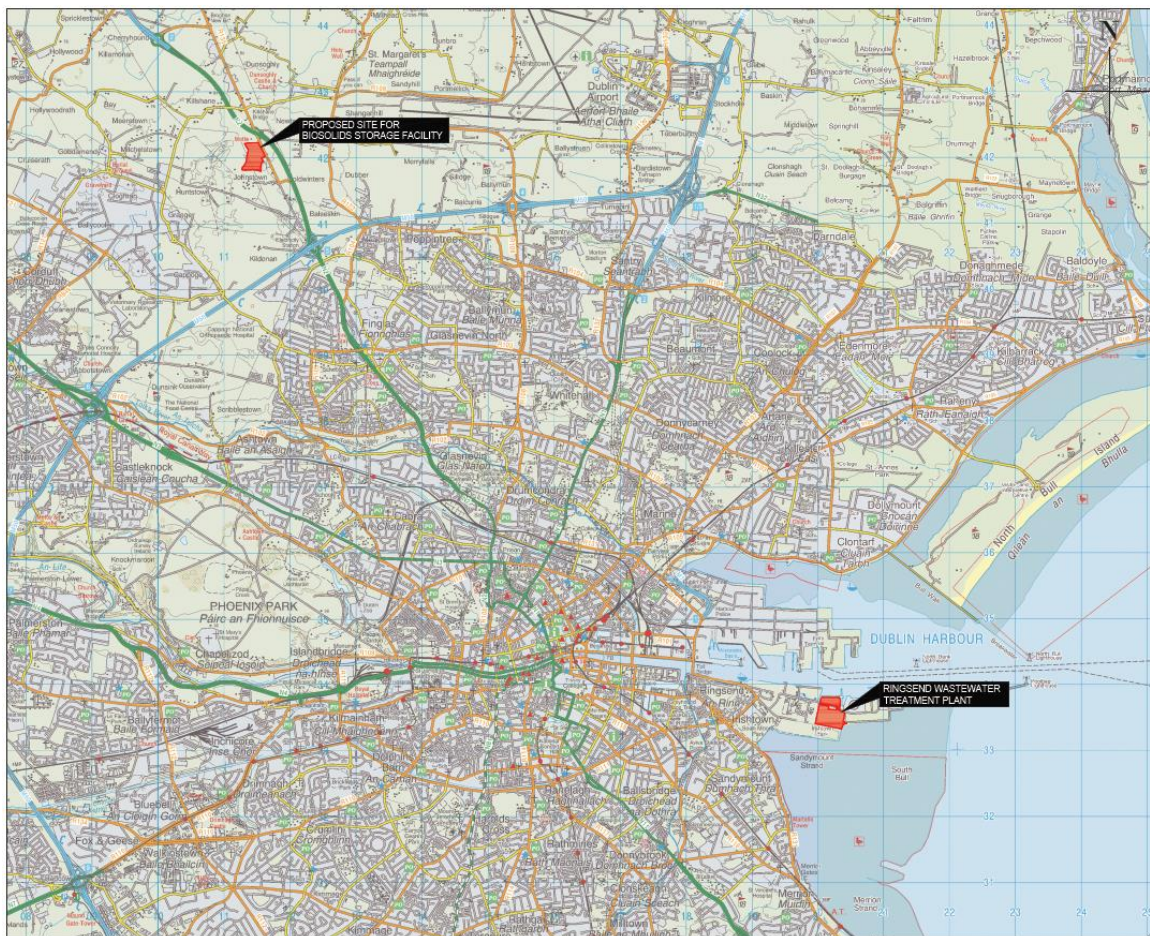
4 SITE DESCRIPTION AND CONTEXT

4.1 Introduction

This application comprises works at the Ringsend Wastewater Treatment Plant, Pigeon House Road, Dublin 4 and also a storage/transfer facility in the form of a new Regional Biosolids Storage Facility (RBSF) at Newtown, North Road (R135), Dublin 11. The purpose of the RBSF is to store treated biosolids that will be produced at the Ringsend WwTP and the proposed WwTP for North County Dublin (the Greater Dublin Drainage (GDD) Project). This facility will be for the purposes of storing biosolids prior to the transfer of the waste to other facilities, separately managed and monitored, from where the land spreading occurs.

The two sites are remote from one another, as can be seen in Figure 6 and are in two different Local Authority administrative areas.

Figure 6: Location of the Ringsend WwTP & Regional Biosolids Storage Facility



4.2 Ringsend WwTP Site

The Ringsend WwTP is located at the Poolbeg peninsula. This area forms the southern bank of the mouth of the River Liffey which flows out into Dublin Bay. The existing Ringsend Wastewater Treatment Plant is approximately 4.3 km east of College Green, Dublin City Centre. The existing treatment facility measures 14.7ha and is divided by the Pigeon House Road. The area to the north of the Pigeon House Road (river side) currently accommodates the storm water holding tanks and comprises approximately 3.5 Ha. The area to the south of the Pigeon House Road comprises 11.2 Ha.

The facility currently operates within the context of industrial related uses for example, scrap metal storage, power generation and municipal recycling and port related activities. This area can be characterised to comprise the day to day service operations for Dublin City and its environs. The

area also includes important amenity areas including Sandymount Strand, the coastal walk, Irishtown Nature Park and Clan na Gael Fontenoy GAA Club. The treatment of municipal wastewater at this location dates back to the early 20th century (c. 1906). The facility currently has a design capacity for approximately 1.64 million Population Equivalent (PE).

The facility comprises of 2 no. sites divided by a local road - Pigeon House Road which runs in an east to west direction, weaving around the established industrial uses and port related uses. This road provides the principal form of vehicular access for the area. The site to the north comprises the storm water holding tanks associated with the treatment. The existing storm tanks include residual boundary space along the southern and eastern sections of the site which operates as areas for maintenance of same.

Figure 7: Location of the Ringsend WwTP



The principal site to the south comprises the main wastewater treatment facility (c. 11.2 Ha), with the original 1906 sedimentation tanks now acting as Storm Tanks situated to the north (c. 3.5Ha). Positioned to the west is the recently operational Covanta waste to energy incinerator. To the immediate south, and adjoining the site, is a strip of green open space, known as 'Goose Green'. Beyond this area to the south is the Irishtown Nature Reserve, which provides a buffer between the industrial related uses and the Sandymount Strand area. To the south-east, the continuation of the strand area, for recreational walkway towards the Great-South Wall. To the east of the site is the entrance to the Poolbeg Power Stations, which forms the predominant land use and includes the notable Poolbeg towers.

The existing treated outflow pipe discharges into the Liffey Estuary via the cooling water discharge channel to the north-east of the ESB Poolbeg Power Station, as shown in Figure 8. There are no residential dwellings in the immediate area of the subject site. The nearest established resident dwellings are placed approximately 950 metres (Strand Road) from the site, with the existing Coast Guard Cottages (11 no.) being approximately 975m from the boundary of the existing WwTP. As outlined under Section 8 of this Report, lands to the west of the Ringsend WwTP are designated a Strategic Development Zone. Based on the Planning Scheme (Interim Publication) the potential for residential use would be situated approximately 650m from the south-west boundary of the Ringsend site at its closest.

Figure 8: Ringsend WwTP Storm Overflow and Primary Discharges Point

4.3 Regional Biosolids Storage Facility

The site of the planned RBSF comprises a separate 11Ha site of partially developed land. It is situated on the western side of the N2 national road and is accessed from the North Road/ R135, as shown in Figure 9. The site is relatively flat. To the west, in Huntstown, there is a quarry and power station. There is a residential property to the east of the site and other one-off housing further from the site in what is a predominantly industrialised townland. Currently, there are roads, services, a number of buildings and boundary fencing on this site. A tributary of the Huntstown Stream, which in turn is a tributary of the River Ward, flows along the western and southern boundary of the site. The site naturally drains to this watercourse.

Figure 9: Location of the Regional Biosolids Storage Facility

5 PROPOSED DEVELOPMENT

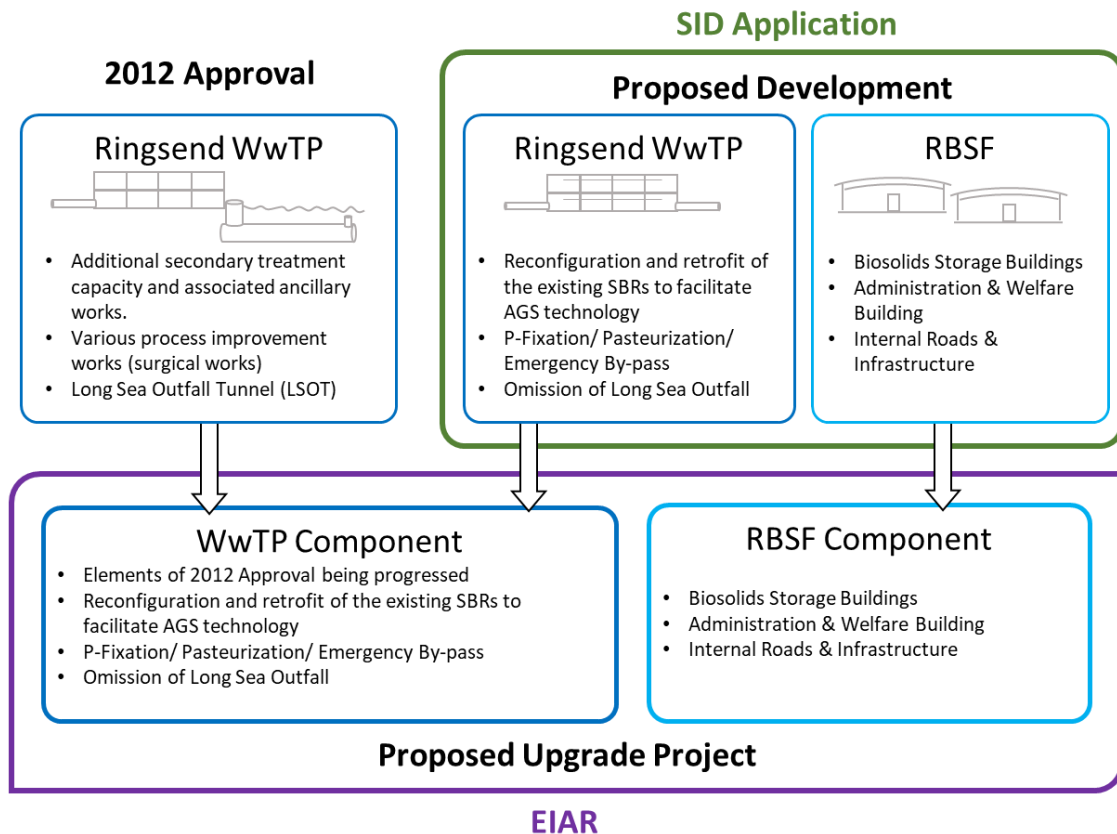
5.1 Introduction

The purpose of this Section of the Planning Report is to describe the '*Proposed Development*' for which permission is now being sought under this SID application for a period of 10 years.

The '*Proposed Development*' forms part of the overall development at Ringsend WwTP and comprises new additional works and amendments to particular elements of the '*2012 Approval*' at Ringsend WwTP. The Proposed Development also comprises of a new Regional Biosolids Storage Facility (RBSF) at Newtown, North Road, Dublin 15.

The combination of the 2012 Approval, as amended and the '*Proposed Development*' is defined as the '*Proposed Upgrade Project*'. It is the '*Proposed Upgrade Project*' that the accompanying EIAR assesses and not just the Proposed Development in isolation. Figure 10 below sets out where the '*Proposed Development*' is placed within the context of the wider '*Proposed Upgrade Project*'.

Figure 10: The Proposed Development in the context of the 2012 Approval and Proposed Upgrade Project.



In this context, the layout of the Section is to assist ABP in understanding how the 'Proposed Development' fits within the 'Proposed Upgrade Project'.

Accordingly, the layout of this Section is set out as follows:

- Proposed Development (Section 5.2)
- Duration of Permission (Section 5.3)

Section 6 of this Report sets out the specific details of The Proposed Upgrade Project.

5.2 Proposed Development

This application for permission, pursuant to Section 37A of the Planning & Development Act 2000, as amended, is for a 10 year permission for development comprising revisions and alterations to the existing and permitted development at the Ringsend Wastewater Treatment Plant and for a new Regional Biosolids Storage Facility; being two components of an integrated wastewater treatment project and detailed below (the Proposed Development).

On 16th November 2012 An Bord Pleanála granted approval to Dublin City Council under section 226 of the Planning and Development Act 2000, as amended, for the Ringsend Wastewater Treatment Works Extension Project in accordance with plans and particulars, including an Environmental Impact Statement and Natura Impact Statement, lodged with the Board on the 13th of April, 2012 (An Bord Pleanála Reference Number: 29N.YA0010 as amended by: 29N.YM0002 & 29N.YM0004)(the 2012 Approval).

The 2012 Approval proposed to expand the existing wastewater treatment works at Pigeon House Road, Ringsend, Dublin to its capacity of 2.4 million population equivalent within the confines of its current site. The 2012 Approval included the following elements of works:

- Additional secondary wastewater treatment capacity at the wastewater treatment works site (approximately 400,000 population equivalent) including associated solids handling and ancillary works.
- A 9 kilometre Long Sea Outfall (in tunnel), commencing at an onshore inlet shaft approximately 350 metres east of the wastewater treatment works and terminating in an underwater outlet riser/diffuser in Dublin Bay.
- Road network improvements in the vicinity of the site (during the construction phase).

The Proposed Development comprises revisions and alterations to the 2012 Approval. The proposed revisions and alterations will continue to facilitate the expansion of the existing wastewater treatment plant (Ringsend WwTP) to its permitted capacity of 2.4 million population equivalent within the confines of its current site. However, this will now be achieved primarily through the introduction of aerobic granular sludge (AGS) technology at the Ringsend WwTP. The introduction of this technology will facilitate the omission of the 9 kilometre Long Sea Outfall Tunnel and the continued use of the existing outfall.

Component 1 - Ringsend Wastewater Treatment Plant, Pigeon House Road, Dublin 4

Permission is sought for development comprising revisions and alterations to the 2012 Approval on an overall site of 14.8 Ha. The Proposed Development consists of:

- Reconfiguration and retrofitting of the existing Sequencing Batch Reactor (SBR) Tanks, up to 24no. in total, to facilitate the use of a new AGS technology.
- Associated works, including the provision of:
 - A Pasteurisation Building (approximately c.31.5m x c.14.5m x c.8.5m high).
 - A Phosphorus Recovery Building (approximately c.38.5m x c.15.5m x c.20m high).
- Ancillary site development works (pipework and electrical works), plant (new and adjustments to existing) and landscape works (including boundary treatments) to accommodate the above development, including:
 - The use on a permanent basis of a vehicular entrance off Pigeon House Road, and associated landscaping and internal road, along the eastern boundary of the site, previously granted a temporary permission under ABP Ref. 29N.YM0002.
 - A new underground electrical connection to an existing underground ESB cable, along the southern boundary of the site (at the south west corner only) and at the edge of, and extending into the South Dublin Bay and River Tolka Estuary SPA.
 - Bypass Culvert, Ultraviolet (UV) Lamps, internal road reconfigurations and additional carparking.
 - The continued use of 2 no. temporary construction compounds (C1 and C2) for the 10 year duration of the permission sought. These compounds were previously permitted

under ABP Ref. 29N.YM0004 for a period of 3 years. Proposals for the temporary Construction Compound C1 includes a pedestrian connection to the south-west corner of the Ringsend WwTP. Temporary Construction Compound C1 is partially located within the Poolbeg West Strategic Development Zone as defined by Statutory Instrument No. 279 of 2016. A protected structure (Pigeon House Fort) (RPS No. 6794) is partially located within temporary Construction Compound C2.

- The omission of the permitted 9 km Long Sea Outfall (in tunnel) for the purposes of discharging into the Dublin Bay area from an onshore inlet shaft approximately 350 metres east of the existing Ringsend WwTP (including any associated construction works) which in turn provides for the continued use of the existing outfall to the River Liffey serving the Ringsend WwTP.
- The omission of 2 no. temporary construction compounds located to the west of the Ringsend WwTP and also the omission of one temporary construction compound on Pigeon House Road to serve the Long Sea Outfall (in tunnel); all of which were previously permitted under ABP Ref. 29N.YA0010.

The overall application site area of the development proposed at the Ringsend WwTP is approximately 17.9 Ha and includes a protected structure (RPS No. 6794).

The overall existing Ringsend WwTP is 14.7 ha and is divided into two sites by Pigeon House Road; 11.2 Ha to the south of the road where the Ringsend WwTP is located, with a further 3.5Ha located to the north of the road.

The 2no. temporary construction compounds which are the subject of this application amount to approximately 3.79 Ha, part of which is located within the 14.7 Ha site of the Ringsend WwTP.

Part of the application site is within the Poolbeg West Strategic Development Zone as defined by Statutory Instrument No. 279 of 2016.

The Ringsend agglomeration including the WwTP has an existing discharge authorisation licence in accordance with the requirements of the Waste Water Discharge (Authorisation) Regulations 2007, as amended. A licence review will be carried out in accordance with the requirements of the licence review process.

These proposals are described in further detail under Section 5 of this Report. In addition, Volume 2, Section 3: Description of Proposed Upgrade Project, sets out the Proposed Development in the context of the Proposed Upgrade Project.

Component 2 - Regional Biosolids Storage Facility at Newtown, North Road (R135), Dublin 11

Permission is also sought for development of a Regional Biosolids Storage Facility located in Fingal County at a separate 11 Ha site comprising:

- Demolition of existing single storey structures on site comprising of a security kiosk (approx. 22 sq.m gfa), the weighbridge kiosk (approx. 19 sq.m gfa), an ESB Sub-Station (approx. 16 sq.m gfa) and an administration building (approx. 85 sq.m gfa), together with the partial removal of existing internal roads and partial removal / diversion of existing drainage infrastructure as appropriate to accommodate the development.
- Provision of 2no. biosolids storage buildings, each approximately 50m wide, 105m long and 15m in height, including solar panels on the roof of one building. These buildings have a combined capacity to store up to 48,000 cubic metres of biosolids waste at any one time.
- Provision of 4no. odour control units, each with 18.2m high discharge flues.
- Mechanical and electrical control building (approx. 35 sq.m gfa, 4 m high).
- Provision of a single storey site administration building for office, welfare facilities and meeting rooms (approx. 130 sq.m gfa) and associated staff car parking.
- Use of the existing vehicular access off the R135, including provision of new 2.7m high entrance gates to serve the Regional Biosolids Storage Facility.
- All ancillary landscape and site development works, including:

- Provision of 2no. new weighbridge facilities (1no. weighbridge on entry and exit of the Regional Biosolids Storage Facility).
- Provision of new ESB Sub-Station (approx. 40 sq.m gfa).
- Landscaping and boundary treatments, including new 2.7m high boundary to North Road/R135.
- Provision of fire protection holding tank (approx. 6.7m high).
- Provision of a HGV cleaning and set down area.
- Formation of new footpath and landscaped verge to R135 along site frontage.
- Provision of drainage, water, external lighting, and other utilities.
- Diversion of 450mm surface water pipe.
- 1no. signage structure, 5.2m in height erected on posts accommodating 2no. signage zones: 2.4m x 1.7 and 2.4m x 1.2m, located at the site entrance.

The Regional Biosolids Storage Facility will require a Certificate of Registration for the activity of storing biosolids (treated wastewater sludge).

These proposals are described in further detail under Section 5 of this Report. In addition, Volume 2, Section 3: Description of Proposed Upgrade Project sets out the Proposed Development in the context of the Proposed Upgrade Project.

The planning drawings have been prepared by a consortium of J. B. Barry & Partners, T. J. O'Connor & Associates, and Royal HaskoningDHV. A full-scale version of these drawings accompany this planning application which describes the project for which permission is now being sought.

A3 copies of these drawings are also contained in Appendix 5 of the EIAR accompanying the application.

5.2.1 Proposed Development - Component 1 - Ringsend Wastewater Treatment Plant, Pigeon House Road, Dublin 4

The Proposed Development to be carried out by Irish Water at the Ringsend WwTP comprises revisions and alterations to the development approved by Reg. Ref 29N.YA0010 as amended by: 29N.YM0002 & 29N.YM0004. The location of this Development is shown in Figure 11 below.

Figure 11: Location of Proposed Development - Ringsend WwTP site



The site of the Ringsend WwTP is approximately 14.7Ha and includes a protected structure (RPS No. 6794). The Ringsend WwTP is divided into two sites by Pigeon House Road; 11.2Ha to the south of the road where the WwTP is located, with a further 3.5Ha located to the north of the road.

The proposed revisions will continue to facilitate the expansion of the existing wastewater treatment works to its capacity of 2.4 million population equivalent within the confines of its current site, as permitted under Reg. Ref 29N.YA0010. However, this will now be achieved primarily through the introduction of aerobic granular sludge technology throughout the plant. The introduction of this technology will facilitate the omission of the 9 kilometre Long Sea Outfall Tunnel and the continued use of the existing outfall.

The development of the Ringsend WwTP on Pigeon House Road will comprise the works approved in 2012, revisions approved under section 146B of the Planning and Development Act and the Proposed Development for which permission is now being sought under the Section 37E application. These facilities are required to provide for the increased capacity to 2.4 million PE and to achieve the required effluent standards.

The drawing pack contains a Site Layout of the proposed revised project, drawing number ref Y15710-PL-916 and provides the proposed Site Layout Plan including reference to the various elements of the Proposed Development. In addition, the proposed works are also indicated on Figure 10 of this Report. Further details of the various works are described in Appendix 3A of the E.I.A.R.

The components of the Proposed Development at the Ringsend WwTP Facility are described in the following Sections of this Report.

5.2.1.1 Modifications to the Existing Sequencing Batch Reactor (SBR) Tanks

The Proposed Development seeks permission to reconfigure and retrofit the existing (as built), Sequencing Batch Reactor (SBR), up to 24no. in total, to facilitate the use of a new Aerobic Granular Sludge (AGS) technology. The location of these Tanks are shown in Figure 12.

Figure 12: Location of SBR Tanks within the Ringsend WwTP site



The existing SBR Tanks form an inverted 'L' shape on site. A dashed yellow line shown in Figure 12 illustrates the extent of these tanks. There are 24no. total, which operate in 3 No. blocks, each with 4 tanks across 2 decks. The retrofit of these tanks, which is required to allow the operation of the AGS process, will necessarily be carried out on a phased basis for each deck, three separate phases for Blocks 1 to 3.

The main components and associated characteristics of these elements of the construction works are:

- Each SBR Tank, through a phased basis, will be emptied and decommissioned to accommodate the proposed retrofitting and the contents of each tank will be transferred to other tanks which remain operational with new internal mechanical equipment influent and sludge pipework, flow collection channels, air pipework and diffusers as required for the operation of the AGS process.
- Removal of some internal dividing walls in each tank of the existing reactors;
- Construction of new internal dividing walls to create sludge buffer capacity and water level adjustment capability within the reactors;
- Fitting out with influent and sludge pipework, treated effluent collection channels, air pipework and diffusers;
- Reconfiguration of influent feed pipework – to include new pipe feed;
- Replacement and upgrade of existing air blower equipment and associated pipework;
- Ancillary facilities to include electrical, process monitoring and control equipment.

As the Ringsend WwTP is a live plant it will be in operation during the course of the installation of the AGS process, the retrofit of the Tanks will occur on a phased basis.

5.2.1.2 Associated works, including the provision of:

5.2.1.2.1 A Sludge Pasteurisation Building

A Pasteurisation Plant forms part of the Proposed Development within the Ringsend WwTP site. The location of this structure is shown in Figure 13. This Building forms part of the sludge water stream treatment process and provides for the pasteurisation of primary sludge, which will optimise the use of the thermal hydrolysis plant.

Figure 13: Pasteurisation Plant



The main components and associated characteristics of this element of the construction works are:

- Building of approximate dimension of c.31.5 metres x c.14.5m x c.8.5 m high. This will be an industrial type building utilising PVC coated insulated cladding of similar construction to other facilities on site;
- It is expected that the building will be constructed on a piled foundation with a reinforced concrete floor slab;
- Fitting out with pasteurisation equipment, pumps and associated pipework. Much of the internal plant equipment may be delivered prefabricated for installation on site;
- Ancillary facilities to include electrical, process monitoring and control equipment.

The specific Drawings relating to the Sludge Pasteurisation Building are as follows:

Drawing no. Y15710-PL-915 - Proposed Revised Project Sheet 1 of 2

Drawing no. Y15710-PL-916 - Proposed Revised Project Sheet 2 of 2

Drawing no. Y15710-PL-955 – Pasteurisation Plant Building – Plan, Elevations and Section

5.2.1.2.2 A Phosphorus Recovery Building

A new Phosphorus Recovery Facility will be developed within the Ringsend WwTP site, as shown in Figure 14. This Facility will be a proprietary process system requiring mechanical handling systems with the function of extracting phosphorus from the liquid or sludge stream.

The main components and associated characteristics of this facility are:

- The system is housed in an Industrial type building utilising PVC coated insulated cladding of similar construction to other facilities on site; It measures approximately 38.5m x 15.5m x 20m high.
- It is expected that the building will be constructed on a piled foundation with a reinforced concrete floor slab;
- Fitting out with silos, liquid and (depending on the process technology utilised) sludge handling pipework; struvite (product) handling, bagging and/or truck loading equipment;
- Internal road reconfigurations and additional car parking to accommodate the Phosphorus Recovery Facility.
- Ancillary facilities to include electrical, process monitoring and control equipment.

Figure 14: Phosphorus Recovery Facility Location



Phosphorus

Phosphorus is a finite resource and an important mineral and nutrient required for food production and plant and human/animal growth. It is usually found in its phosphate form in wastewater. This ability of phosphorus to support photosynthesis and growth can lead to eutrophication through excess plant growth and decay in receiving waters. This is one of the reasons why phosphorus is usually limited by environmental regulators as a pollutant, in waters deemed sensitive to eutrophication. In Ringsend, the phosphorus limits have been set at 1mg/l as Total-P (any form of phosphorus) by the EPA. The EPA on the other hand has also published research⁵ on phosphorus and indicated that its recovery is simple and technically feasible and that "Long-term national

⁵ Ryan et al., EPA STRIVE Series No. 189 - Identification and evaluation of phosphorus recovery technologies in an Irish context (2014)

strategies in relation to wastewater treatment and sludge management should consider the implications for potential phosphorus recovery."

Additionally, phosphates have been linked to process inefficiency and the clogging of pipes and scaling of other wastewater treatment equipment in many wastewater treatment plants. Any increased scaling has the potential to: increase energy use; reduce process efficiency; and, require significantly increased maintenance associated with the removal of such deposits.

These drivers have led to the development of several techniques for successful recovery of phosphates from wastewater. Using AGS technology, there is an opportunity to increase the amount of phosphorus made available in the process cycle and allow its recovery through a number of proprietary 'phosphorous fixing' techniques. The recovered phosphorus can then be made available for agronomic benefit through its use as a fertiliser and can eliminate a further need for chemically manufactured fertilisers. Compound fertilisers in Ireland have been traditionally sold in Ireland based on their Nitrogen, Phosphorus and Potassium (NPK) ratio e.g. 10-10-20. In practice, through Nutrient Management Plans, these ratios are often adjusted when spreading or injecting soils with fertilisers to meet their growth requirements.

The recovered phosphorus can then be made available for agronomic benefit through its use as a fertiliser and can eliminate a further need for chemically manufactured fertilisers. Compound fertilisers in Ireland have been traditionally sold in Ireland based on their Nitrogen, Phosphorus and Potassium (NPK) ratio e.g. 10-10-20.

The recovered phosphorus is known as "struvite" and is currently distributed directly into the fertiliser market.

The phosphorus recovery unit will be installed in a dedicated building as part of a tendered service to Irish Water. The tender will require the provider to efficiently maximise the recovery of phosphorus to meet Irish Water's stated aims of increased sustainability. The service provider will also establish routes to market and assist in the achievement of new regulatory approvals associated with classifying the material as a product. The dedicated building will allow for storage prior to direct distribution to market providers. After commissioning of the recovery unit, it is expected that market trials will follow before the recovered fertiliser can be formally declared a product through the EPA's end of waste approval mechanism. Equally, the fertiliser will have to gain approval under REACH regulations⁶ from the Health and Safety Authority.

Until the struvite is declared as a product by the EPA, it will be handled in the same manner as other biosolids generated at the Ringsend WwTP. During this time, which might be up to 2 years, struvite will be stored at the RBSF for certain months of the year. Storage of biosolids is explained further in section 5.2.2.1.3.

The main benefits from the recovery of phosphorus as struvite are as follows: increased P-recovery and consequent reductions in emissions to the environment; and the creation of a high-value fertiliser in line with the objective of the Code of Good Practice for use of Biosolids in Agriculture which displaces a need to extract minerals, manufacture and ship chemical fertilisers. Since struvite will be recovered on-site from the sludge and wastewater, it can be trans-shipped directly from the recovery site reducing associated transport movements with the manufacture of this material. All of these benefits when combined have the potential to significantly lower the overall carbon-footprint associated with the use and manufacture of fertilisers/biosolids.

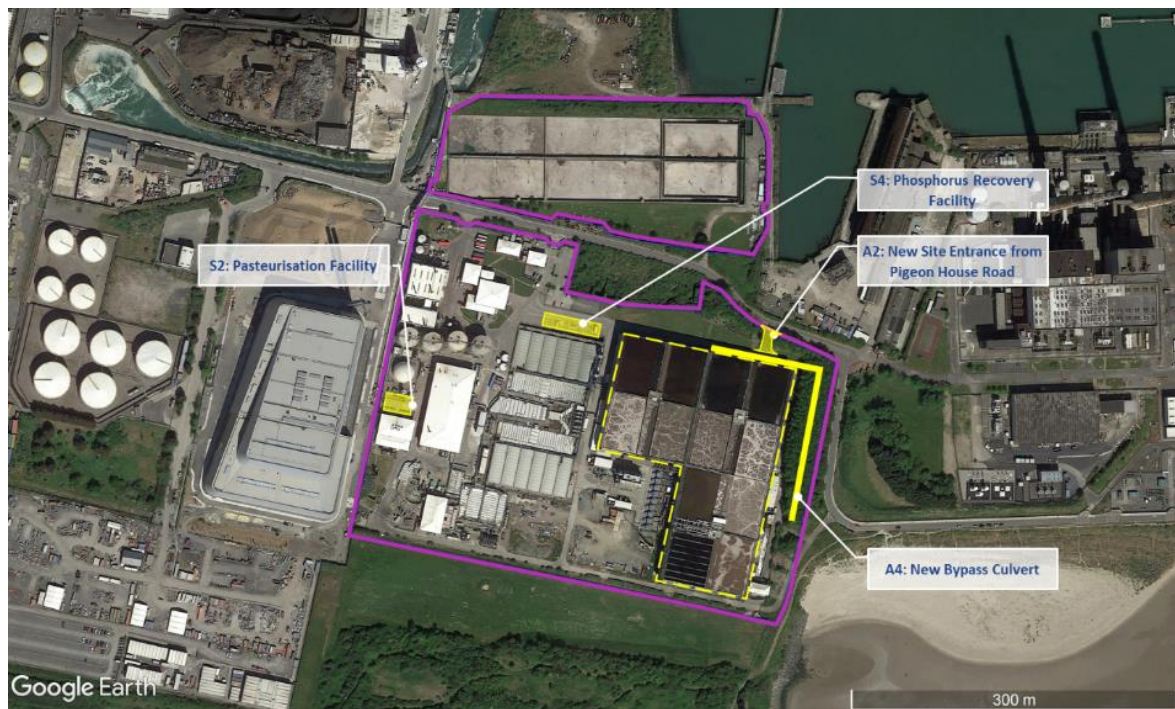
The characteristics of this product is described in the Volume 2, Section 3 of the EIAR.

⁶ *Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) is a European Union regulation (2006). REACH addresses the production and use of chemical substances, and their potential impacts on both human health and the environment.*

The specific drawings relating to the Phosphorus Recovery Buildings are as follows:

Drawing no. Y15710-PL-915 – Proposed Revised Project Sheet 1 of 2
 Drawing no. Y15710-PL-916 – Proposed Revised Project Sheet 2 of 2
 Drawing no. Y15710-PL-951 – P-Fixation Plant – Site Location Plan
 Drawing no. Y15710-PL-952 – P-Fixation Plant – Plan and Section
 Drawing no. Y15710-PL-953. – P-Fixation Plant – Elevations

Figure 15: Location of Ancillary site development works as part of the Proposed Development.



5.2.1.3 Ancillary site development works

Arising from the principal changes, there are ancillary site development works (pipework and electrical works), plant (new and adjustments to existing) and landscape works (including boundary treatments) to accommodate the Proposed Development. These are broadly indicated under Figure 14 & 15. The most notable of these works include the following:

- A reinforced concrete culvert within the Ringsend WwTP site located underground. The closed pipe will provide a connection between the existing outfall culvert at the eastern boundary of the site to the existing internal bypass allowing discharge to the storm tanks, just north of the existing SBR tanks. This pipe measures approximately 3.65 metres wide x 2.3 metres high and is 252m in length.

The specific Drawings relating to the Emergency Bypass Culvert are as follows:

Drawing no. Y15710-PL-915 – Proposed Revised Project Sheet 1 of 2
 Drawing no. Y15710-PL-916 – Proposed Revised Project Sheet 2 of 2
 Drawing no. Y15710-PL-957 – Effluent Fine Screens and Bypass Culvert – Indicative Plan and Location

- Modification to the collection of sludge and Fats Oils & Greases (FOG) from the Primary Settlement Tanks (PSTs).

The specific Drawings relating to the Modifications to the collection of FOG, are as follows:

Drawing no. Y15710-PL-915 – Proposed Revised Project Sheet 1 of 2

Drawing no. Y15710-PL-916 – Proposed Revised Project Sheet 2 of 2

- Installation of additional Ultraviolet (UV) lamps in existing outlet channel.

The specific Drawings relating to the UV Lamps are as follows:

Drawing no. Y15710-PL-915 – Proposed Revised Project Sheet 1 of 2

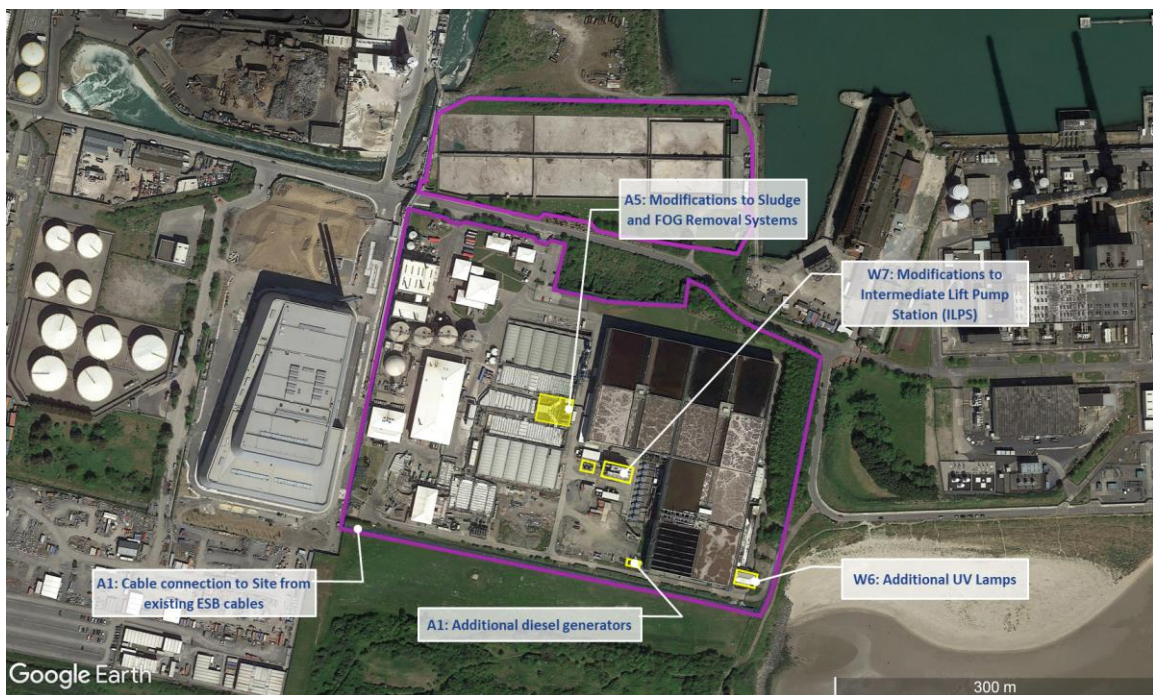
Drawing no. Y15710-PL-916 – Proposed Revised Project Sheet 2 of 2

Drawing no. Y15710-PL-959 – UV Treatment Unit

- New internal road alignment to accommodate the Phosphorus Building in addition to 16no. new car parking spaces.

Drawing no. Y15710-PL-951 – P-Fixation Plant-Site Location Plan

Figure 16: Location of Ancillary site development works as part of the Proposed Development.



- The use on a permanent basis of a vehicular entrance off Pigeon House Road, and associated landscaping and internal road, along the eastern boundary of the site, previously granted a temporary permission under ABP Ref. 29N.YM0002.

Drawing no. Y15710-PL-960 – Compound Site Locations

- A new connection to an existing underground ESB cable, along the southern boundary of the site and at the edge of, and extending to within the South Dublin Bay and River Tolka Estuary SPA.

Drawing no. Y15710-PL-916 – Proposed Revised Project Sheet 2 of 2

- The continued use of 2 no. Temporary Construction Compounds (C1 and C2) for the 10 year duration of the permission. The temporary C1 compound is located south-west of the Ringsend and partially located within the Poolbeg West Strategic Development Zone as defined by Statutory Instrument No. 279 of 2016.
- Temporary Construction Compound C2 is located adjacent to a protected structure (Pigeon House Fort) (RPS No. 6794).
- These compounds were previously permitted under ABP Ref. 29N.YM0004.

The specific drawings relating to compounds are as follows:

Drawing no. Y15710-PL-960 sets out the changes to the compounds permitted under the 2012 Approval, as amended and the changes arising from the Proposed Development.

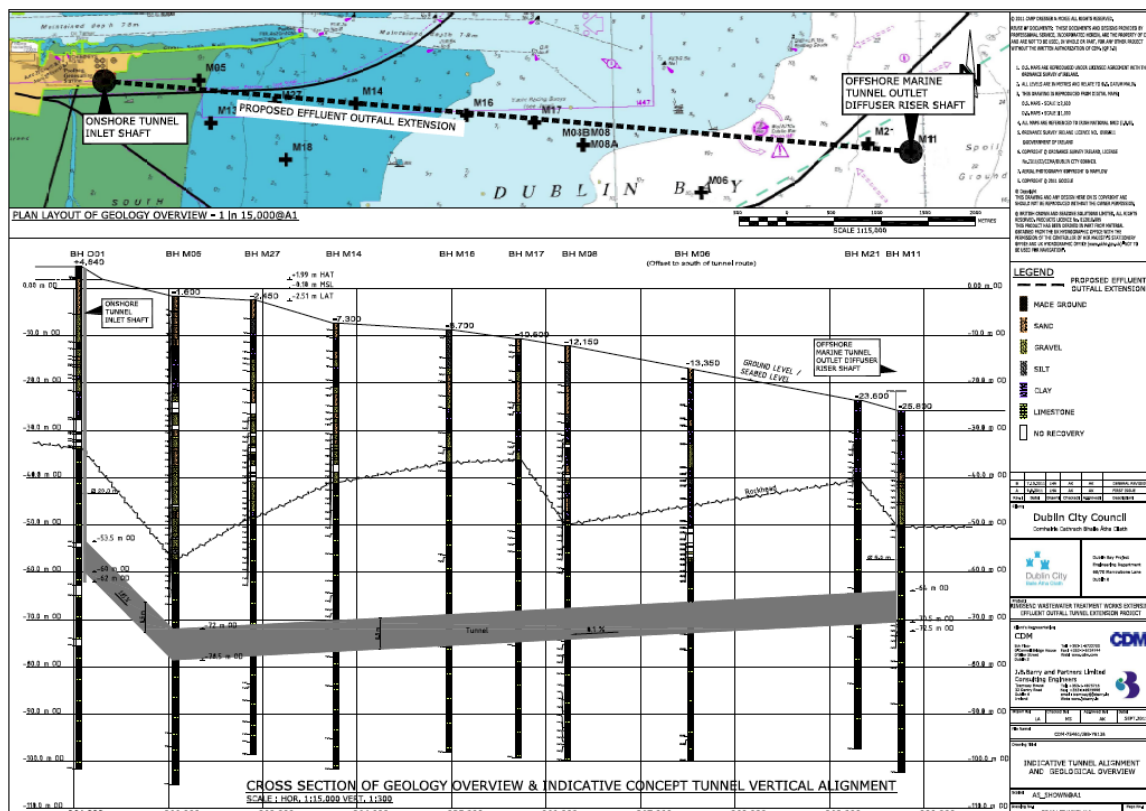
Drawing nos. Y15710-PL-961 to Y15710-PL-977 inclusive relate to compound and site access changes.

The 2no. temporary construction compounds, which are subject of this application amount to approximately 3.79Ha, part of which is located within the 14.7Ha site of the Ringsend WwTP.

5.2.1.4 The Omission of the 9Km Long Sea Outfall Pipe (in a tunnel)

The omission of the permitted 9km Long Sea Outfall Pipe (in a tunnel) for the purposes of discharging into the Dublin Bay area from an onshore inlet shaft approximately 350 metres east of the existing Ringsend WwTP (including any associated construction works) which in turn provides for the continued use of the existing outfall to the River Liffey serving the Ringsend WwTP.

Figure 17: The Extent of the Long Sea Outfall Pipe (in a tunnel), Source: Indicative tunnel alignment and geological overview drawing submitted as part of the 2012 Approval.



5.2.1.5 The Omission of Permitted Construction Compounds

Further to the removal of the Long Sea Outfall Pipe (in a tunnel), the associated compounds are no longer necessary.

The Proposed Development seeks permission to omit two no. temporary construction compounds located to the west of the Ringsend WwTP and also the omission of one temporary construction compound on Pigeon House Road to serve the Long Sea Outfall (in tunnel); all of which were previously permitted under ABP Ref. 29N.YA0010

The extent of changes to the construction compounds is illustrated under Drawing Y15710-PL-960. An extract of this drawing is shown in Figure 18.

Figure 18: Image of permitted, proposed and omitted compounds

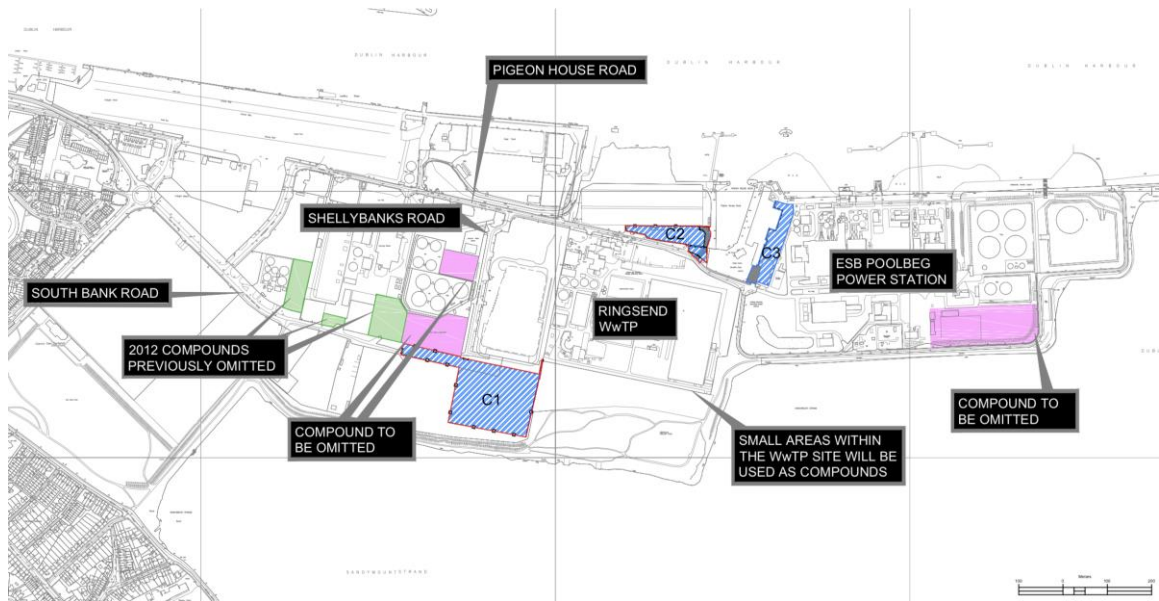


Figure 19: Location of Construction Compound Areas



5.2.1.5.1 Location of compound areas

Compound C1

The site is located on the adjacent lands to the southwest of the Ringsend facility and comprises 3.04 Ha. The lands are owned by the Dublin Port Company and was used by Covanta as a construction compound to facilitate the works within the Waste to Energy facility. Letters of Consent are provided by Dublin Port Company, Dublin City Council and Dublin Waste To Energy Ltd and can be found within the planning application documentation Section of the application.

Up to recently the compound area was utilised as a car park, welfare facilities, storage area and temporary site offices in the form of portacabins. The compound is currently accessed from Shellybanks Road and it is proposed that C1 will continue to be accessed from Shellybanks Road. The compound will also be accessible from South Bank Road. It is intended pedestrian access will be provided from the compound into the WwTP site through the south east corner of the Dublin Waste to Energy site via a 3 metre wide temporary access with double gate entry. It is envisaged that the compound will be maintained in its existing use as a car park facility, storage area and site offices.

Compound C2

The Compound C2 site is located to the north of the existing Ringsend WwTP Upgrade works and comprises approximately 0.75 Ha, with 0.64 Ha owned by Irish Water and the remaining portion owned by Dublin City Council. Letter of Consent is provided by Dublin City Council and can be found in the planning documentation. The site is currently unused and is bounded to the north by the storm tanks for the Ringsend WwTP and to the south by the north wall of Pigeon House Fort. The site is currently accessed from Pigeon House Road through an existing 3.7m entrance gate. The proposed site compound will require shared access to facilitate entry for the WwTP operator and Irish Water for the ongoing operation and maintenance of the Ringsend WWTP storm tanks.

As the existing access is part of protected structure (i.e. Pigeon House Fort), a more suitable access arrangement for HGV movements is shown on planning drawing ref: Y15710-PL-962.

It is envisaged the compound will be utilised for the storage of materials and plant throughout the Proposed Upgrade Project. Concrete traffic barriers will be utilised on the compounds southern boundary to protect the north wall of Pigeon House Fort. The installation of the concrete barriers will be an obligation for the contractor as part of the mitigation measures to protect the north wall of Pigeon House Fort as outlined in Volume 3, Section 11: Cultural Heritage. The contractor will strip the topsoil, which is considered shallow subsurface works, within Compound C2 and install a free draining hardcore finish. Following the works, it is intended to reinstate the area to its current condition.

The contractor will also be required to use a steel structure to protect the existing piers of the entrance against accidental impact created by construction works, see EIAR, Volume 3, Section 11: Cultural Heritage.

Compound C3

The site is located to the northeast of the existing Ringsend WwTP and comprises approximately 0.73 ha. The site is owned by Dublin City Council. The site is accessed from Pigeon House Road and bounded by a disused Power Plant on the west and an ESB facility to the east.

The extent and duration of this temporary compound formed part of the S146B application (ABP Ref 29N.YM0004) granted in January 2018. Compound C3 will not be required for longer than the permitted three-year period and therefore, does not form part of the Proposed Development. The C3 compound will be used as part of the Ringsend WwTP Upgrade Project.

5.2.1.5.2 Construction Access

Access to the Ringsend WwTP site for construction phase will be made available as described below and shown in Figure 20.

Access X1

This is the existing access to the main operational part of the wastewater treatment plant site on Pigeon House Road. It will be utilised for construction activity within the operational area of the existing wastewater treatment plant.

Access X2

This access is located east of Access X1. Construction of this access is being carried out in 2018 under planning approval Ref. 29N.YA0010 as amended by ABP and for use on a permanent basis as set out under the Proposed Development. This comprises access onto Pigeon House Road and haul road with accommodation works (i.e. small bund removal).

Access X3

This access is located at the SE corner of the wastewater treatment plant site. The access is from Pigeon House Road and a spur road constructed under planning approval 29N.YA0010. The C3 compound will be used as part of the Ringsend WwTP Upgrade Project.

Access X4

This access is located at the SW corner of the Ringsend WwTP site. As part of the Proposed Development, a temporary pedestrian access only is to be provided from compound C1 and the site. This pedestrian access was approved for 3 years under the Section 146 application for compounds.

Figure 20: Access points and Construction Compounds for the Proposed Development



5.2.1.5.3 Construction Environmental Management Plan

An Outline Construction Environmental Management Plan (CEMP) has been developed for the construction stage of the works. It is provided in the accompanying EIAR. The Outline CEMP is based on best practice and the latest recommendations of the Construction Industry Research and Information Association (CIRIA Guidelines). The CIRIA Guidelines is user-friendly reference tool that provides practical advice about managing construction on site to minimise environmental impacts. Contract-specific CEMPs, based on the Outline CEMP, will be prepared by the respective contractors for each contract at construction stage.

The whole project team have responsibility for good environmental management and onsite training will be provided for all relevant site staff prior to construction commencement.

5.2.1.6 Construction and Commissioning Phase

5.2.1.6.1 Construction Programme

The proposal to upgrade the treatment facilities at Ringsend WwTP will involve significant interaction with the existing plant and will necessarily be carried out on a phased basis over a period of 7 to 10 years.

The programme has several requirements, constraints and interdependencies which impact on when the works need to, or can, be undertaken. These include:

- Overall objective of achieving the nitrogen and phosphorus (and other) treatment standards required by the UWWT Directive and providing the required capacity to treat the incoming load to the plant;
- Requirement to increase sludge handling capacity commensurate with increased loading to the plant;
- Requirement to maintain the existing treatment plant in operation during the construction phase;
- Restricted work areas available;
- Procurement procedures

Construction activity commenced in early 2018 on the contract for the provision of additional secondary treatment capacity permitted under the 2012 Approval. Construction activity on the site of the Ringsend WwTP is expected to continue until 2028 i.e. if the full SBR retrofit of the AGS technology is carried out, subject to planning permission being granted. The intensive period for construction activity is in 2019 and 2020 when the capacity upgrade works are being carried out and which will overlap with the retrofit of SBR tanks in the upper deck.

Where possible mitigation measures will be implemented to minimise delays. Should the opportunity arise to bring forward any of the construction works and to expedite the overall completion date, the programme may also be altered.

It should be noted that the site must remain operational at all times and cater for the needs of the Greater Dublin catchment during the construction of the upgrade works.

Necessary flexibility will be required to provide for situations such as:

- Extended duration of routine maintenance requirements.
- Inclement weather conditions affecting load to the treatment plant as well as directly on construction.
- Mechanical, electrical or process malfunctions.
- Reduced treatment capacity when existing SBR tanks are out of service to facilitate retrofitting of internal pipework and before the secondary treatment capacity extension is commissioned.

The proposed works and facilities at Ringsend WwTP, as described above, will be provided through a number of construction and installation contracts. These contracts will be procured through Design/Build/Operate (DBO), Design/Build (DB) and Employer Design contract types.

The proposal to upgrade the treatment facilities at Ringsend WwTP will involve significant interaction with the existing plant and will necessarily be carried out on a phased basis over a period of 7 to 10 years.

An indicative programme showing when the various work elements are expected to be carried out is shown on drawings Y15710-PL-921, provided in Volume 5, Part A. Additional construction phasing 'snapshot' drawings are included drawings Y15710-PL-922 to 924. The snapshot drawings, set at half yearly intervals, show which construction activity is expected to be underway in each period. Whilst the programme is date driven, construction activity sequencing and duration will alter as a result of issues that can impact on any project of this scale and complexity. All construction periods

indicated are subject to change depending on, for example, the contractor's construction approach, weather conditions and typical construction issues that can arise to delay or disrupt the works.

We refer ABP to Voume 2, Section 3 of the EIAR, which sets out in great detail the characteristics of construction and the programme in the context of the 'Proposed Upgrade Project'.

5.2.1.7 Biosolids

5.2.1.7.1 Production of Biosolids

Following treatment of sludge, three biosolids products will be transported from site for reuse on agricultural land. The three products and the estimated annual quantities for the design capacity are shown in Table 4 below:

Table 4: Annual Average Tons per Year of Biosolids

Product	Dry Solids	Wet Wt ⁷
	tonnes/yr	tonnes/yr
Biocake	12,100	46,500
Biofert	15,300	16,700
Struvite	5,500	6,000
Total	32,900	69,200

5.2.1.7.2 Transportation of Biosolids

Biocake and Biofert will be transported to the RBSF from the Ringsend WwTP (and GDD WwTP if permitted) in articulated trucks with tipping trailers. The trailers each have a capacity of approximately 40 m³. These haulage vehicles, referred to hereafter as HGVs, are approximately 14 m long and have 6 axles. In transporting biosolids to the RBSF, HGVs will operate throughout the year and the generated traffic volumes will be relatively constant.

The transportation of biosolids from the RBSF to spread lands will be seasonal. The spread lands currently used for application of biosolids produced at the existing Ringsend WwTP are located in South Leinster and parts of Munster. There is no proposal to change the location of the spread lands. The peak periods for traffic will be the spring and autumn. Past records from the existing storage facility show that approximately 80% of the total annual trips to spread lands occur during the months of February, March, August and September. The remaining traffic occurs mainly in January, April, May and October.

The estimated traffic volumes to the RBSF is provided in Volume 4, Section 13 of the EIAR.

⁷ The products have differing moisture contents (Biocake c26%; Biofert c92%; Struvite c92%)

5.2.2 Proposed Development - Component 2 - Regional Biosolids Storage Facility at Newtown, North Road (R135), Dublin 11

The location of the RBSF component is set out under Section 5.1 of this Report and described in further detail in this Section. The purpose of the development of the RBSF is to provide a facility, serving the Greater Dublin region, for the storage of treated wastewater sludge (biosolids) prior to its re-use on agricultural lands. The sources of biosolids to be stored at the RBSF are the Ringsend WwTP, the Fingal WwTP's and the proposed GDD WwTP and associated Fingal wastewater treatment plants.

5.2.2.1 Characteristics of the RBSF

5.2.2.1.1 Need for Storage Facility

The purpose of the RBSF is to store treated biosolids that will be produced at the Ringsend WwTP and the proposed GDD WwTP. The National Wastewater Sludge Management Plan (Irish Water, 2016) (NWSMP) identifies reuse of treated wastewater sludge (biosolids) as a fertiliser on agricultural land as the preferred outlet in the short to medium term. Constraints on land spreading due to legislation and due to demand for the product require that biosolids must be stored during certain times of the year. The development of regional facilities for the storage of biosolids from wastewater treatment plants is recommended in the NWSMP. In relation to sludge storage in greater Dublin the NWSMP concluded:

"In line with the approach taken to other facilities in this Plan, the development of Sludge Storage Facilities will no longer be considered solely on a per-plant or per-county basis. Where appropriate, Sludge Storage Facilities will be developed to serve a number of local plants and/or a wider regional need. In particular, the upgrade to the Ringsend WwTP sludge hub and the proposed GDD WwTP will result in a significant increase from current sludge volumes with a consequent increase in storage requirements. Therefore, a dedicated sludge storage facility should be developed in conjunction with the expansion of Ringsend to meet its requirements and take account of other future needs in the region".

Biosolids from Ringsend WwTP are currently stored at a facility in Thornhill, Co. Carlow. The Thornhill facility has a certificate of registration from Carlow County Council for a maximum annual throughput of 25,000 tonnes of biosolids. It is proposed to transition to the use of the RBSF on a phased basis if and when the RBSF is permitted by ABP, constructed and available for use.

The proposed facility will be used solely for storage purposes. No treatment of the biosolids will take place at the facility.

5.2.2.1.2 Biosolids Description

Organic and inorganic matter in the wastewater (both solid and dissolved) end up in a sludge arising from the treatment process which is subject to further separate treatment on the relevant WwTP site. The sludge is treated to recover gas (the energy from which is used to run the plant), to reduce its volume, and to kill pathogens (bacteria and viruses). The treatment process results in 'biosolids', a biologically stable product with pathogens (viruses, bacteria) reduced to the extent that renders it safe for use in agriculture, and containing high levels of plant nutrients, e.g. nitrogen and phosphorus. The level of pathogen reduction from the treatment process is such that the treated sludge material can be transported and stored without any further health protection measures being necessary, subject however to compliance with all applicable waste regulations.

At the Ringsend WwTP the treated sludge is also currently dewatered or dried to give two products for transport to storage: a 'cake' (approximately 26% dry solids) or a dry granular material (approximately 92% dry solids). Both of these materials are high in nutrients and are used as soil conditioners and fertilisers in agriculture. Both are generically termed 'biosolids', i.e. a fully treated sludge product which is biologically stable, has a low odour with pathogens reduced to the extent that renders it safe for use in agriculture. The cake material is known as "biocake" and the drier granular material is known as "biofert".

Following the proposed upgrade at the Ringsend WwTP, through the application of the AGS technology, there is an opportunity to increase the amount of phosphorus made available in the process cycle and allow its recovery through a number of proprietary 'phosphorous fixing' techniques. The recovered phosphorus can then be made available for agronomic benefit through its use as a fertiliser and can eliminate a further need for chemically manufactured fertilisers. The recovered phosphorus is known as "struvite" and is commonly distributed directly into the fertiliser market. It will be necessary for struvite to be declared a product through the EPA's "end of waste" approval mechanism and, as a fertiliser. It will require approval under REACH regulations from the Health and Safety Authority. Until the struvite is declared as a product by the EPA, and approved under REACH regulations by the HSA, it will be handled in the same manner as other biosolids generated at the Ringsend WwTP.

5.2.2.1.3 Storage Requirements

Irish Water is applying to ABP for planning approval for development of the RBSF based on a 20 year design horizon (up to 2040), that the facility will have the capacity to store already treated wastewater sludge from Ringsend WwTP and the proposed GDD WwTP13F⁸, giving a total requirement of approximately 3.0 million PE.

Irish Water will review the storage requirements within Greater Dublin in the medium to long term and develop the proposed RBSF further within the space provided on the selected site if and as required. This further development would require planning consent before it could proceed, but the site has capacity for further storage facilities should they be needed.

The estimated quantities of biosolids generated at Ringsend WwTP are described in detail under Section 3.3.6.1 of Volume 2, Section 3 of the accompanying EIAR. A summary of estimated quantities of biosolids, based on the estimated load including headroom, from each source is provided in Table 5 below.

Table 5: Storage volume requirement for biosolids (Extract from EIAR, Volume 2, Section 3)

Year	Source	Biosolids Type	Annual		Storage Period	
			Dry Tonnes (tDS)	Tonnes	Tonnes	Volume (m ³)
2021	Ringsend WwTP	Biocake	11,400	43,700	14,000	13,340
		Biofert	15,300	16,650	5,400	12,200
	Total					25,540
2025	Ringsend WwTP	Biocake	7,700	29,640	9,500	9,100
		Biofert	15,300	16,650	5,400	12,200
	GDD WwTP	Biocake	4,880	19,520	6,250	6,000
	Total					27,300
2040	Ringsend WwTP	Biocake	10,900	42,000	13,460	12,800
		Biofert	15,300	16,650	5,400	12,100
	GDD WwTP	Biocake	7,900	31,700	10,200	9,700
	Total					34,600

Note: Figures are rounded. Bulk density of biofert is approximately 440kg/m³ and biocake is approximately 1050 kg/m³.

⁸ Sludge at GDD WwTP will be treated at a Sludge Hub Centre (SHC) on the site of the WwTP. In addition to the sludge from the WwTP, the SHC which will treat wastewater sludge imported from the WwTPs serving other towns and villages in the area of Fingal.

Fertilisers, such as biosolids, are not permitted to be spread on land between 15 October and 12 January in the areas of the country where there is the most likely demand, for the biosolids to be stored at the RBSF. These rules are set out by the Department of Agriculture, Food and Marine to comply with the European Union's Nitrates Directive. Storage volumes will be provided at the RBSF to cater for a 4 month period to allow for the non-growing periods in winter and summer.

Table 5 shows that the total storage required at the RBSF by 2040 is estimated at 35,400 m³. Storage will be provided in two buildings at the RBSF site and will be provided on a phased basis, as described in more detail in the following sections.

Additionally, struvite will be produced at the Ringsend WwTP as a by-product to wastewater treatment process following the commissioning of the phosphorus recovery system at the beginning of 2021. Irish Water may not be in a position to apply for the "end-of-waste" approvals and/or REACH approvals until the P-recovery technique is selected as the standard to be attained and quality of product cannot be assessed unless specific techniques are known. There will be a need for an alternative disposal route pending these approvals, and for an interim period there is a requirement to facilitate its reuse under traditional waste regulated channels of land-spreading.

In the short term it is likely that struvite will be stored in segregated bays at the RBSF until market arrangements are firmly established. Unlike biocake and biofert, struvite will typically be bagged on the WwTP site to facilitate transfer to the fertiliser industry. However, in the interim situation, the product will be delivered in bulk to the RBSF. The annual quantities of struvite are expected to be in the region of 6,000 tonnes per year based on the design load for the Ringsend WwTP. Sufficient storage can be provided at RBSF for the required storage months in the expected interim period.

5.2.2.2 Proposed Works

5.2.2.2.1 Site Layout

The site is owned by Fingal County Council and the local authority was granted approval by ABP in 2006 for a waste recovery facility at the proposed RBSF site. The planned activities included recovery of construction and demolition waste, wastewater sludge treatment, biological waste treatment and waste transfer for municipal waste. Details of the previous planning application are provided in Section 9 of this Report. Certain enabling works, including drainage works, internal access roads, boundary fencing, and electricity and telecommunications infrastructure have been carried out at the proposed RBSF on the basis of the 2006 approval.

The site is accessed from the R135. Vehicles arriving to the site from the M50 approach from the south and turn left into the site. The road outside the site includes a clearly marked left turning slip lane for the site. Vehicles leaving the site turn left on to the R135 for all routes.

The site comprises mainly sections of grassland separated by a road network. The development works that were completed include a road network, boundary fencing, administrative building, weighbridge areas, drainage systems, and other site services. An ESB 110 kV overhead transmission line and a 38 kV underground cable both cross the southwestern corner of the site. The existing site layout is shown in Figure 21 and drawing Y17702-PL-003 in Volume 5, Part B. The site boundary is shown as a purple line.

The site generally slopes from east to west. There is a difference of approximately 2 to 3 metres between the highest and lowest areas on the site. A tributary of the Huntstown Stream, which in turn is a tributary of the River Ward, flows along the western and southern boundary of the site. The site naturally drains to this watercourse.

The proposed RBSF will be located in the northern part of the site as shown Figure 22. There is no development proposed in the southern part. This area is reserved for possible future requirements, which would require planning consent under a separate application before it could proceed.

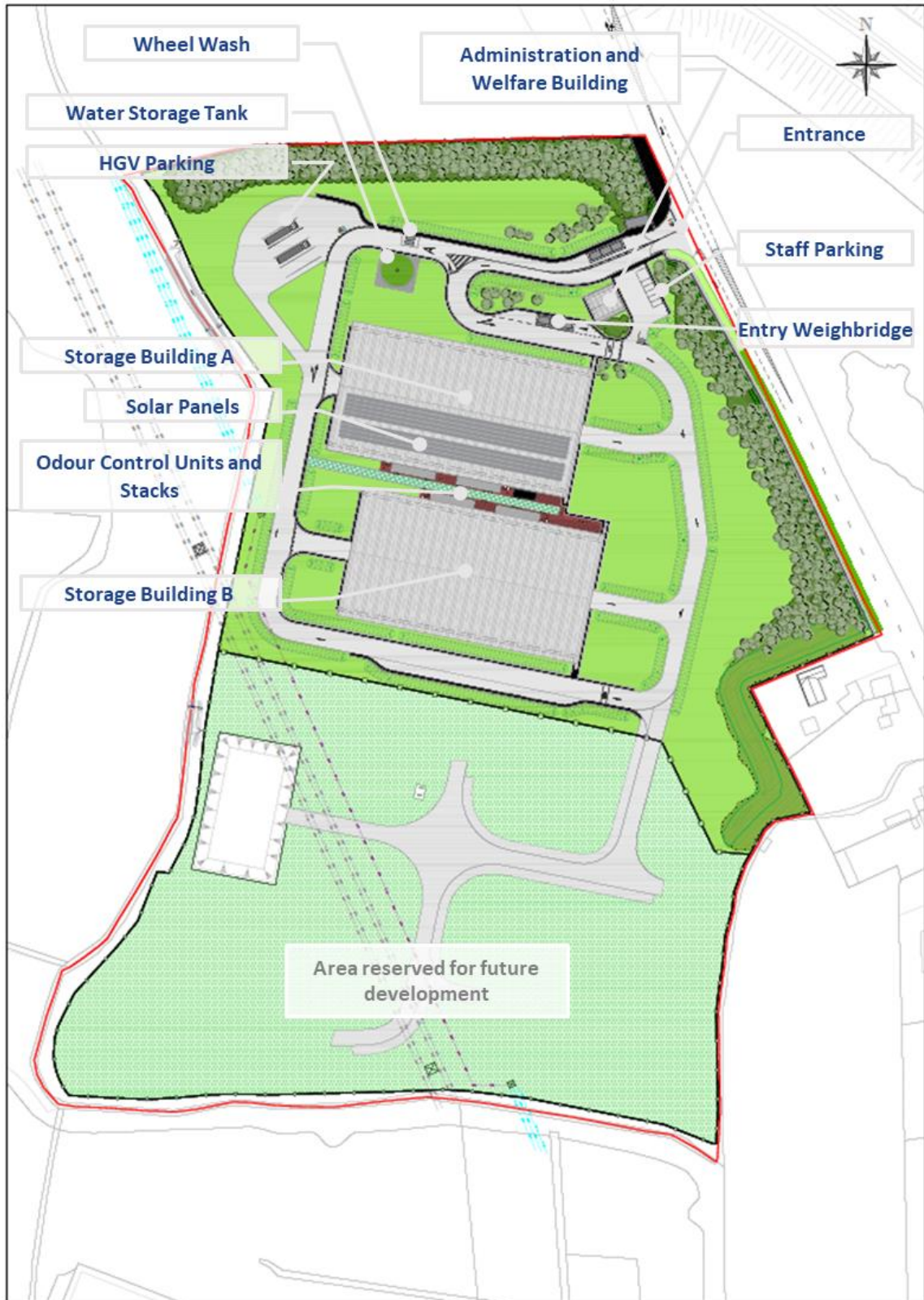
Figure 21: Existing Site

5.2.2.2 Biosolids Storage Buildings

The storage volume requirements outlined in section Table 5 will be provided in two storage buildings. Each building will be approximately 105 m long and approximately 50 m wide and 15 m in height.

The storage capacity of the buildings is related to the quantities of biosolids to be stored at the facility and therefore, the overall capacity can vary. Biocake can be stacked to approximately 4m high and biofert can be stacked 7m high. The storage capacity of the RBSF, based on the proportion of the two types of biosolids in storage, summarised in Table 5. As a consequence, permission is being sought for the larger of the two storage capacities to allow for the greatest quantum to be stored.

The two storage buildings will be located centrally, toward the northern end of the site. Their location allows the utilisation of some of the existing infrastructure on the site and is such that, a new internal road can be provided around the perimeter of the buildings. The road will allow vehicular access to the storage buildings and for vehicles to travel past the buildings and around the site in one direction. The distance from the site boundary and the buildings is at least 25 m on the western side of the site and 70 m on the eastern side. The longest side of each building will be orientated northwest to southeast and the buildings will be parallel to one another. The location of the storage buildings is shown in Figure 21 and on planning drawing ref: Y17702-EA-002.

Figure 22: RBSF Proposed Site Layout Plan

At the highest point, the roof level will be approximately 15.2 m above ground level and the eaves level of the building will be approximately 12 m above ground level. Haulage vehicles bringing biosolids to and from the storage facility will access the buildings from the eastern end and will exit from the western end. Entry and exit doors for vehicles will be located at either end of each building. In addition to security doors at each entry and exit point for HGVs, a lightweight inner door (known as a fast-action door) that can be opened and closed quickly will be provided so that the duration that the doors are open is minimised. Separate doors will be provided for pedestrian access.

Haulage vehicles will tip biosolids inside the buildings (only) during operation. The building height is determined by the tipping height of the trailers of the haulage vehicles when they are within the building.

The architectural design of the storage buildings incorporates a curved roof. The curved roof profile results in a visual blurring of the buildings' roof apex. The roof is visually separated from the walls by a 'shadow band' and the footprint of the buildings is staggered. The slanting front façade of both buildings extends beyond the side walls of the building into the landscape. The external envelope will comprise insulated metal cladding panels, which will clad the entire perimeter of the building. As shown in the architectural drawings, Y17702-PL-007 and Y17702-PL-009, provided in Volume 5, Part B, the colour of the panels will generally be grey and silver. This architectural design is provided to enhance the visual perception of the development from the most prominent views of the site.

The architectural design is described in further detail in the Architectural Concept Statement, which is enclosed with the SID application for the Proposed Development.

5.2.2.2.3 Storage Capacity

The storage capacity of the buildings is related to the quantities of biocake and biofert expected to be stored at the facility. Biocake can be stacked between 3 m to 4 m high and biofert can be stacked approximately 7m high, thus making the storage of biofert more efficient. The estimated volumes to be stored are outlined in Table 5.

The two storage buildings could store over 48,000 m³ of biofert. However, it is estimated that the volume of biofert at Ringsend WwTP requiring storage will only reach approximately 12,700 m³. On the other hand, the storage buildings will have an approximate capacity of 26,200 m³ if all biosolids were in the form of biocake.

5.2.2.2.4 Administration and Welfare Building

A building for general management of operations and welfare facilities for staff working at the facility will be provided near the entrance gate. The building will contain an office, a meeting room, a canteen, toilets and a changing room with shower. A parking area will be provided beside the Administration and Welfare Building and will provide up to 10 parking spaces for staff and visitors.

The architectural design incorporates a curved roof to compliment the design of the storage buildings. The overall dimensions of the one-story building will be 10 m wide and 13 m long. The height of the ridge will be approximately 3.8 m above ground level.

5.2.2.2.5 Weighbridges

The operator of the RBSF will be required to keep records of biosolids quantities arriving to, and departing from, the site. Two weighbridges will be provided at the RBSF. A weighbridge for weighing haulage vehicles will be located on the entrance road approximately 150 m from the entrance to the site, allowing arriving vehicles to queue safely away from the public road. A separate lane will be provided at the weighbridge to allow vehicles to pass by parked vehicles.

A second weighbridge will be provided on the exit route from the site to weigh vehicles leaving the RBSF. The design proposes that the weighbridges will be automatically operated and controlled from the administration building. Neither of the existing weighbridge kiosks will be retained.

5.2.2.2.6 HGV Parking Area

A parking area for 4 haulage vehicles will be provided in the northwest corner of the site. This area is provided for HGVs to park during working breaks or for drivers or checking vehicles before recommencing their journeys.

5.2.2.2.7 Electrical Services

The existing electricity substation at the northeast corner of the site is 4.8 m long by 4.3 m wide. It will be rebuilt at the same location to bring it into line with current ESB standards. A new customer electrical room will adjoin the substation. This room is a requirement identified during consultation with ESB. Overall, the footprint of the substation and customer electrical room will be approximately 9.2 m long and 4.4 m wide. They are shown on planning drawing ref Y17702-PL-006.

Electrical supply will be brought from the customer electrical room to a mechanical and electrical control building (referred to hereafter as 'Control Building') and onward to the mechanical and electrical equipment within the storage buildings. Where feasible existing underground ducting routes on the site will be retained. The Control Building will be located between the storage buildings.

Solar Panels are proposed on the roof of Storage Building A to provide a portion of energy requirements of the RBSF in line with the renewable energy requirements set out in Building Regulations Part L Conservation of Fuel and Energy – Other than Dwellings 2017.

5.2.2.2.8 External Lighting

External lighting will be provided along the internal roads, pedestrian routes and around the buildings and other plant rooms. It is possible that a portion of the existing lighting columns and associated ducting and chambers on the site will be retained and incorporated in the proposed site layout. This will be subject to review at detailed design stage. Road-side lighting columns will be approximately 6m high and the lighting columns in the HGV parking area will be 8m high. They are shown on planning drawing ref: Y17702-PL-014 and Y17702-PL-023.

5.2.2.2.9 Water Supply

An existing water supply on the site will provide potable water to the Administration and Welfare Building and it will supplement the supply to the Wheel Cleaning Area. The watermain will be extended around the storage buildings to provide a water supply for fire fighting purposes as shown on drawing Y17702-PL-020 and Y17702-PL-021 in Volume 5, Part B. The watermain will be supplied by a fire water holding tank located to the southwest corner of the two storage buildings, as shown on planning drawing ref: Y17702-PL-020 and Y17702-PL-024.

5.2.2.2.10 Wheel Cleaning Area

A wheel cleaning area will be provided in the northeast corner of the site beside the HGV parking area, near the exit route for HGVs. Within the storage buildings, biosolids will be stored in bays either side of the vehicle route through each building, therefore minimising the amount of biosolids material that can get caught in the tyres of the HGVs passing through. Nonetheless, there is potential for HGVs to track the material out of the building as they exit. The wheel cleaning will be provided to clean the HGVs and prevent tracking biosolids beyond this area or on to the public road.

Details of an indicative system is provided on drawing Y17702-PL-024 in Volume 5, Part B. Water for wheel cleaning equipment will be mainly supplied from a rainwater harvesting system, in accordance with Irish Water policy to incorporate water conservation designs for non-potable applications within its facilities, where appropriate. The supply may be supplemented by a mains water, when required. Typical wheel cleaning systems recycle approximately 50% of the water used. The wash down material from HGVs will be collected in a silt chamber, in which silt and solids will settle out. The overflow water from the silt chamber will flow to a wash-down separator where oil and fuel will be captured. It will then flow to the foul drainage system on the site and in turn, will discharge to the public sewer. Solid material collected in the settlement chamber will be removed by a licenced contractor who will haul the material to an appropriate waste facility.

5.2.2.2.11 Surface Water Drainage

Rainfall run-off from building roofs, road surfaces and other impermeable areas within the area of the Proposed Development will be conveyed in a new drainage system, incorporating a treatment train comprising of sustainable drainage systems (SuDS). The surface water treatment train approach follows guidance from the *Greater Dublin Strategic Drainage Study (Appendix A, Glossary, Volume 3, Environmental Management) and SuDS Manual (C753) (CIRIA, 2015)*. The proposals are summarised as follows:

Rainwater Harvesting System

- A rainwater harvesting system, incorporating a storage tank, will collect run off from the roofs of both storage buildings and will be designed in accordance with Section 11.3 of the SuDS Manual.

Permeable pavement

- A maintenance access road between the buildings will be constructed of reinforced grass or a similar permeable pavement.

Swales

- Dry Swales (a grassed channel with a filter drain directly beneath) will convey other surface run-off, including roads and footpaths, to an underground attenuation area at the northwest corner of Storage Building A. Dry swales are proposed following consultation with DAA (the authority responsible for the operation of Dublin Airport). DAA raised concern regarding the potential for areas of open water to develop and attract birds. The incorporation of a filter drain (referred to as a 'dry swale') will avoid standing water within the swales.

There is an existing underground attenuation area, comprising of plastic storage units surrounded in filter stone, in the northwest corner of the site. It will be expanded to cater for the RBSF element of the Proposed Upgrade Project. There is an existing discharge point from this attenuation area into the adjacent watercourse which will be retained. At the discharge point to the stream a flow control device will be provided to limit discharge flows to acceptable levels (equivalent to the greenfield run-off). An emergency shut-off device will also be provided in order to prevent discharge to the stream in the event of a fuel spillage from a vehicle or wash-out from the storage buildings due to fire fighting water.

Swales and detention basins will be lined with a geotextile membrane to mitigate against risk of pollution to ground water. In addition to the SuDS features, grit traps will be provided in the sumps of road gullies. Furthermore, an oil/fuel separator will be provided prior to the connection to the existing retention area to capture pollutants in run-off on roads and parking areas within the site.

The swales, permeable pavement and detention basin will be constructed in accordance with details provided in the SuDS Manual (C753). Chambers and surface water pipes will be in accordance with the Greater Dublin Region Code of Practice for Drainage Works (Dublin Region Local Authorities).

5.2.2.2.12 Foul Drainage

Foul drainage requirements will be accommodated in the existing foul drainage network on the site. Foul drainage pipes currently drain to a pump station in the southern part of the site. This pump station is connected to the public sewer via an existing rising main, which connects to a pump station outside the site on the opposite side of the R135.

Provision of foul drainage is required for the following elements of the Proposed Development:

Administration and Welfare Building

- Wastewater from the Administration and Welfare Building from general daily activities, such as showers, toilets and canteen.

Wheel Cleaning Area

- Wastewater from the Wheel Cleaning Area, as described in the earlier paragraphs in this section.

Entrance to the storage buildings

- Surface run-off at the entrance to the storage buildings will be connected to the foul drainage network, rather than the surface water network, due to the potential for biosolids content. Any run-off due to cleaning or other water usage within the buildings will be directed to the same foul drainage system in the same manner.

5.2.2.2.13 Odour Control

An odour control system has been designed to ensure that odour does not give rise to any nuisance beyond the boundary of the RBSF. The system will involve extracting air from within the storage buildings on a continuous basis. Fans located outside, between the storage buildings, will draw air through ducting to an outside odour control unit comprising an organic filter media.

The treated air will be emitted to the atmosphere through vertical stacks which will extend to a height of approximately 3 m above the roof level of the storage buildings. Furthermore, each building will be split into two zones, which can be operated independently. This results in a total of four separate stacks. The indicative location of the stacks is shown in drawing Y17702-PL-004, provided in Volume 5, Part B. The assessment of odour at the RBSF is provided in Volume 4, Section 10. In conjunction with the odour control units, separate entrance and exit routes for HGVs are provided in the design of the storage buildings and the doors at these access/egress points will be fitted with fast action doors to minimise the length of time that the doors will be open.

The indicative location of the odour control units and stacks are shown on planning drawing ref: Y17702-PL-004. The assessment of odour at the RBSF is provided in Volume 4, Section 10 of the EIAR.

5.2.2.2.14 Landscape

The most prominent view of the site by the public is from the R135 road along the boundary on the eastern side of the site. Landscaped berms and planting will be provided in the areas between the buildings on the site and the eastern boundary to provide a visual screen. The landscape design is shown on drawing Y17702-PL-011. The visual impact of the proposed scheme is assessed in Volume 4, Section 14 of the EIAR, and photomontages are provided with the assessment.

5.2.2.3 Construction Phase

5.2.2.3.1 Programme

It is proposed to transition to the use of the RBSF from the existing storage facility at Thornhill, County Carlow. The initial phase of construction for the RBSF will involve the construction of one storage building in 2020. The construction works are estimated to last 12 months. The second building is likely to be constructed in 2024 to meet requirements at that stage following the transition from the Thornhill facility and will last for approximately 9 months. An indicative programme for the construction works for the initial phase is shown in Figure 23.

If necessary, it is expected that both buildings can be constructed in 2020 with little or no extension to the overall construction programme presented in Figure 23. However, additional construction staff and resources would be required during the construction period. The assessment of this scenario is considered in Volume 4 and in particular, in relation to traffic which is discussed in Volume 4, Section 13: Traffic as outlined in the EIAR.

Figure 23: RBSF construction works programme – initial phase

Task No.	Task Description	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
1	Mobilisation and Site Set Up	■	■										
2	Demolition		■	■									
3	Earthworks and Excavation		■	■									
4	Roads		■	■						■		■	■
5	Drainage		■	■	■	■				■			
6	Storage Building Concrete Foundations				■	■							
7	Storage Building Concrete Ground Slab					■	■	■					
8	Storage Building Retaining Walls					■	■	■	■				
9	Structural Steel and Roof Trusses							■	■	■	■		
10	Roofing									■	■		
11	Cladding									■	■		
12	Mechanical and Electrical										■	■	■
13	Administration and Welfare Building					■	■	■	■				
14	Landsacping and Planting										■	■	
15	Comissioning												■

5.2.2.3.2 Construction Activities

Fingal County Council was granted section 175 approval by An Bord Pleanala (Ref. 06F.EL2045) dated 21 April 2006 for a waste recovery facility at the proposed RBSF site. Certain enabling works, including drainage works, internal access roads, boundary fencing, and electricity and telecommunications infrastructure have been carried out at the proposed RBSF site on the basis of that approval. Generally, there are few constraints on the site that will confine access, establishment of site offices and welfare facilities and general construction operations. The design for the RBSF is relatively straightforward. The construction of the RBSF will involve works similar in nature to works for a warehouse or a large storage unit in an industrial estate.

A summary of the main construction activities is summarized as follows:

Mobilisation and Site Set-Up

Mobilisation and site set-up will involve erection of site offices (portacabins), staff welfare and temporary lighting. The site can be accessed at the exiting entrance on the R135. Internal roads are already in place on part of the site.

Demolition Works

The existing structures on the site proposed for demolition are identified on drawing Y17702-PL-003 and include the security/weighbridge kiosk at the site entrance, the weighbridge kiosk near the eastern boundary, an electrical substation (not commissioned) near the site entrance and the existing administration building. These buildings are small relative to the scale of the Proposed Development at the RBSF site, as shown in Table 6. Therefore, the material arising from the demolition works can be processed on site and reused in the proposed works. The demolition work is likely to be carried out by an excavator, using a specialist grab device if required.

Table 6: Dimensions of buildings to be demolished

Building	Dimensions (metres)		
	Length	Width	Height
Administration Building	12	7	4.8
Security / Weighbridge Kiosk	6.5	3.5	5
Weighbridge Kiosk	5.5	3.5	5
Electrical Substation	4.8	4.3	3

In addition, approximately 400 m of internal roads will be reconstructed or removed. This will be carried out by pavement milling machines which will grind the road surface and convey the material to a nearby tipper truck. A high proportion of existing road surface and construction sublayers can be reused in the construction of the new roads on the site. If there is a surplus of reclaimed road surfacing material on the RBSF site it can be provided to a pavement contractor and re-used elsewhere.

While the demolition works are shown at the early stage of the programme Figure 21, the contractor may consider using the existing administration building as a temporary site office and sections of the existing roads as temporary construction routes. This would result in the demolition of the building and removal of roads occurring later in the in the programme.

Earthworks and Excavation

Earth moving machinery such as tipper trucks and large excavators will excavate topsoil and high ground. A large proportion of topsoil material can be retained on site for use in landscaping.

A site investigation carried out in 2017 indicates that the ground conditions are relatively stable, and it is expected that this will provide good bearing capacity for construction of the buildings proposed for this project. Foundations for the Storage Buildings will be approximately 1 metre below the finished ground level at the deepest locations. The design of the buildings does not require deep excavations and piling is not expected. At the highest point of the site, the existing ground level is approximately 1.5 metres above the proposed finished ground levels.

The proposed floor levels of the buildings are such that the volumes of excavated and fill material will be generally balanced. Therefore, if the excavated material is suitable it is possible that it could be used on the site as fill material or to form landscaped areas.

Roads

While the design has incorporated as much of the existing roads as is practical, new roads will be constructed around the storage buildings and will link back to the entrance. Excavations to less than 0.5 metre below finished road level will be required in order to build the road foundation and pavement layers. In low areas, suitable fill material obtained from the excavations or imported to the site, if necessary, will be used to build up the roads to an appropriate level. Bulldozers, compaction rollers and paving machines will be required to construct the roads.

Drainage

Sustainable drainage systems such as swales and detention basins to be provided as part of the drainage regime are shallow grass or planted depressions in the ground and do not require deep excavation. The underground attenuation area and the rainwater harvesting storage tank will be located to the northwest corner of the storage buildings. The construction of both will involve excavations to a depth of approximately 2.5 m and will extend over an area of approximately 1200 m².

Storage Building Concrete Foundations, Floor Slab, Retaining Walls

The foundations for the storage buildings will be constructed with a stone aggregate fill and reinforced concrete. The concrete floor slab will be approximately 300 mm deep and increased in depth at the perimeter and internal retaining walls. Aggregate will be delivered to site in tipper trucks and compacted in-situ with compaction rollers. Reinforcement steel is expected to be pre-formed before delivery to site and assembled on site. A small portion will be cut on site using cutting saws. Concrete will be delivered in concrete delivery trucks and poured using concrete pumps or from concrete buckets lifted by a crane.

Retaining walls will be 7 m high and will be constructed from reinforced concrete. Reinforcement steel is expected to be pre-formed before delivery to site but a small portion will be cut on site. Concrete shutters will be assembled on site. Concrete will be delivered in concrete delivery trucks and poured using concrete buckets lifted by a crane.

Structural Steel and Roof Trusses

Structural steel columns will be prefabricated before delivery and installed on top of the concrete retaining walls using a crane. Steel roof trusses are expected to be assembled on site and lifted into location using a crane and assemble using hand-held power tools.

Roofing and Cladding

Prefabricated insulated metal cladding and roof cladding panels will be installed after structural steel assembly and will involve the use of mobile elevated working platforms and hand-held power tools.

Administration & Welfare Building

The Administration and Welfare Building is similar in scale to three-bed domestic bungalow. The construction of the building will involve standard construction techniques for a building of this nature. The external cladding, which is a material similar to the proposed storage buildings, and the curved roof are the most unique features of its design.

Ancillary Works

The electrical substation will be rebuilt at its existing location in accordance with latest ESB specifications. ESB will bring an underground cable across the R135 from a connection point on the opposite side of the road. The cable will cross site boundary and travel a short distance to the proposed substation.

Both weighbridges and the wheel washing system will be proprietary systems that will be supplied and, it is expected, installed by specialist subcontractors.

It is not expected that tower cranes will require to be erected for the RBSF construction. The large footprint of the two buildings and the relatively short programme would make it unsuitable for the erection of tower cranes. Concrete pours, erection of structural steel columns and roof trusses are expected to be achieved by use of mobile cranes. The contractor will be required to consult with the Dublin Airport Authority in relation to the potential height of cranes. The contractor will be required to consult with the Dublin Airport Authority in relation to the potential height of cranes.

Construction traffic numbers are discussed in Volume 4, Section 13: Traffic. It is worth noting that there is potential concrete supplier (Huntstown Quarry) 1 km to the south of the RBSF site. Concrete delivery vehicles will comprise a large proportion of the peak construction traffic.

5.2.2.3.3 Construction Environmental Management Plan

An Outline Construction Environmental Management Plan (CEMP) for the RBSF Component of the Proposed Upgrade Project is provided in Volume 4, Appendix 17A. The Outline CEMP is based on the best practice and the latest recommendations of the Construction Industry Research and Information Association (CIRIA) Guidelines. It will be adopted and developed further by the contractor for the construction stage of the works at the RBSF. A community liaison officer will be appointed by the contractor, to whom the public can address queries or concerns.

The whole project team have responsibility for good environmental management and onsite training will be provided for all relevant site staff prior to construction commencement.

5.2.2.4 Operational Phase

5.2.2.4.1 Processes

There will be no processes at the RBSF. The main activities will be the delivery, loading/unloading and storage of biosolids all within the storage buildings. There will be no treatment of the biosolids on site.

5.2.2.4.2 Biosolids Haulage Traffic

Biosolids will be transported to the RBSF from the Ringsend WwTP (and GDD WwTP if permitted) in articulated trucks with tipping trailers. The trailers each have a capacity of approximately 40 m³. These haulage vehicles, referred to hereafter as HGVs, are approximately 14 m long and have 6 axles. In transporting biosolids to the RBSF, HGVs will operate throughout the year and the generated traffic volumes will be relatively constant.

The transportation of biosolids from the RBSF to spread lands or local storage facilities will be seasonal. The spread lands currently used for application of biosolids produced at the existing Ringsend WwTP are located in South Leinster and parts of Munster. There is currently no proposal to change the location of the spread lands. The peak periods for traffic will be the spring and autumn. Past records from the existing storage facility show that approximately 80% of the total annual trips to spread lands occur during the months of February, March, August and September. The remaining traffic occurs mainly in January, April, May and October.

The estimated traffic volumes to the RBSF is provided in Volume 4, Section 13 of the EIAR.

5.2.2.4.3 HGV Circulation

The HGVs will enter the site and circulate around the RBSF on a one-way route. HGVs will be weighed at the entrance weighbridge and will travel onwards to the eastern end of one of the storage buildings.

The HGVs will be confined to a central 10m wide corridor within the storage buildings. Storage bays will be located on either side of the corridor. Biosolids will be unloaded and a loader vehicle will move the biosolids to a nearby bay. Conversely, when transporting to spread lands, the loader will move biosolids from a storage bay to a waiting HGV in the central corridor.

The haulage trailers can reach a height of over 10 m when raised up for tipping out materials. The roof level of the buildings is designed to accommodate this requirement.

HGVs will exit the building at the western end and travel on the one-way road to the exit weighbridge to be weighed before leaving site.

5.2.2.4.4 Odour Control

Odour will be managed through the operation of an odour control system, which will involve extracting air from the storage buildings through an organic filter material. In addition, the following measures will be implemented during the operation phase of the project:

- HGV trailers will be covered until entering the Storage Buildings.

- HGVs will enter the storage buildings through fast-action doors.
- Pedestrian access will be provided through separate self-closing pedestrian doors.
- Implementation of odour monitoring plan in conjunction with Operation Environmental Management Plan (OEMP).

5.2.2.4.5 Monitoring

The biosolids will be loaded/unloaded and stored within storage buildings. The biosolids material and the atmosphere within the buildings will be monitored by operations staff for levels of odour, heat and dust. Similarly, the environment will be monitored within the boundary of the RBSF site.

Operations staff will also ensure that the conditions of the Certification of Registration issued by the National Waste Collection Permit Office (NWCPO) under the Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended) will be adhered to.

The Operation Environmental Management Plan (OEMP) will document the necessary procedures for monitoring to be followed by operations staff.

5.2.2.4.6 Solar Energy

The storage buildings have been designed on the site having regard to their orientation, aspect and visibility from the public road. The proposals include the provision of photovoltaic solar panels on the southern portion of Storage Building A. The photovoltaic solar panels will generate a portion of the energy for the RBSF facility in line with the renewable energy requirements set out in Building Regulations Part L Conservation of Fuel and Energy – Other than Dwellings 2017. Further details on this can be found in the Engineering Design Report accompanying this planning application and as shown on planning drawing ref: Y17702-PL-004.

5.3 Duration of Permission

Permission is being sought in this case for a period of 10 years. The need for an extended period of time (i.e greater than 5 years) is due to the particular constraints associated with the construction phase at the Ringsend WwTP facility in particular. Details of the Construction and Commissioning Stage associated with the Ringsend WwTP facility are set out at Section 3.4 of Volume 2 of the EIAR.

The temporary construction compounds at Ringsend WwTP therefore require to have the potential of being active during the construction phase of the project. This is envisaged as occurring over a 7 - 10 year period overall. The programme has several requirements, constraints and interdependencies which impact on when the works need to, or can, be undertaken. These include:

- Overall objective of achieving the nitrogen and phosphorus (and other) treatment standards (as required by the UWWT Directive) and providing the required capacity to treat the incoming load to the plant;
- Requirement to increase sludge handling capacity commensurate with increased loading to the plant;
- Requirement to maintain the existing treatment plant in operation during the construction phase;
- Restricted work areas available;

Construction activity commenced for the provision of additional secondary treatment capacity (the 400,000pe expansion) in early 2018 under the 2012 Approval relative the common elements, i.e. those elements that are common to the 2012 Approval, and the Proposed Upgrade Project. Construction activity on the site of the Ringsend WwTP could continue until 2028 i.e. if the retrofitting of the existing Sequencing Batch Reactors is approved by ABP in this application, and carried out.

It is proposed that the construction compounds will be used at differing times over the construction lifespan of the project. Their precise use and level and nature of activity will be dependent upon the specific project that will be undertaken. For example, compounds may be used to house construction staff in temporary accommodation, to store construction machinery, for car parking, for stockpiling materials.

The construction stage can be divided in to two principal elements; the provision of additional secondary treatment capacity (the 400,000pe expansion) and the retrofit of the existing SBR's with the AGS technology.

Whilst the 400,000pe expansion is programmed to occur over an intensive period during 2018 and 2019, it is the retrofitting of the SBR's that will take the greater period of time to complete. At present there are 12 existing SBR's on a Lower Deck, with a further 12 SBR's above that on an Upper Deck. For operational reasons, it will not be possible to decommission all of the SBR's at once, hence a staged approach to this retrofitting will be required.

It is envisaged that a period of 7 – 10 years from commencement of construction will be required to complete the Ringsend WwTP Project, as amended by the development now proposed. An indicative programme together with indicative plans showing when the various work elements are expected to be carried out is shown on planning drawing ref. Y15710-PL-921 - Y15710-PL-924.

The main components and associated characteristics of this element of the construction works associated with the retrofitting of the SBR's are:

- Emptying and decommissioning of each tank and retrofitting with new internal mechanical equipment influent and sludge pipework, flow collection channels, air pipework and diffusers as required for the operation of the AGS process. The retrofit works will be carried out on a phased basis and the contents of the tanks will be transferred to other tanks which remain operational;
- Removal of some internal dividing walls in each tank of the existing reactors;
- Construction of new internal dividing walls to create sludge buffer capacity and water level adjustment capability within the reactors;

- Fitting out with influent and sludge pipework, treated effluent collection channels, air pipework and diffusers;
- Reconfiguration of influent feed pipework – to include new pipe feed;
- Replacement and upgrade of existing air blower equipment and associated pipework;
- Ancillary facilities to include electrical, process monitoring and control equipment.

It is proposed to undertake the retrofitting of the existing SBR tanks on a phased basis, beginning on the Upper Deck in the first instance. The works to the Lower Deck, have the potential to be more problematic due to space constraints and may take longer to complete as a result.

Irish Water currently has an Operations Contract for Ringsend WwTP which expires in 2025. Accordingly, the current contractor has existing arrangements for biosolids re-use to agriculture which remain available to this date. The RBSF availability is required to cater for additional biosolids not envisaged in the current contract and for all Ringsend and GDD biosolids post 2025.

Arising from all of the above, it is prudent to provide for a period of 10 years to complete the works associated with the overall Ringsend WwTP Upgrade Project.

6 THE PROPOSED UPGRADE PROJECT

While Section 5 above sets out the detail of the Proposed Development for which Permission is now being sought, as explained at Section 3 of this Planning Report, the EIAR in this instance is assessing the impact of the Proposed Upgrade Project as a whole. This Section sets out in summary detail the Proposed Upgrade Project which is being assessed in the enclosed EIAR. Full details of the Proposed Upgrade Project, including a technical discussion of each of its attributes can be found at Volume 2, Section 3 of the EIAR. This is generally summarised as comprising of the following two components:

1. WwTP Component

Proposed upgrade of the Ringsend WwTP, including works as approved by ABP under the 2012 Approval being progressed and proposed revisions under this Section 37E Application.

2. RBSF Component

Proposed Regional Biosolid Storage Facility at Newtown, North Road, Dublin 11.

6.1 Treatment Standards for Ringsend

The upgraded Ringsend WwTP is designed to meet the treatment standards set out in Table 7 and to comply with the UWWT Directive. The current discharge licence (D0034-01) will be subject to a review process by the EPA following completion of the planning process.

Table 7: Treatment Standards

Parameter	Emission Limit	Comment
pH	6 – 9	-
Toxicity	5 TU	-
Faecal Coliforms	100,000 MPN/100ml	Bathing Season
BOD ₅	25 mg/l	Annual 95th Percentile. Peak Limit: 50 mg/l
COD	125 mg/l	Annual 95th Percentile. Peak Limit: 250 mg/l
Suspended Solids	35 mg/l	Annual 95th Percentile. Peak Limit: 87.5mg/l
Total Nitrogen	10 mg/l	Annual Average
Total Phosphorus (as P)	1 mg/l	Annual Average

Water quality modelling has been carried out to assess the dispersal, dilution, and decay of the final effluent parameters on the receiving waters and to demonstrate compliance with the UWWT Directive. This is described in detail in Volume 3, Section 4: Water, of the accompanying EIAR.

6.2 Sludge Generation

The treatment of wastewater currently results in the production of two types of raw sludge which require treatment and processing, viz:

- Primary Sludge (PS) – solids removed in the primary settlement tanks
- Surplus Activated Sludge (SAS) or, in the case of the Aerobic Granular Sludge technology, Surplus Aerobic Granular sludge (SAGS) – growth in sludge biomass arising from biological treatment

These two raw sludge types produced in wastewater treatment are distinct from the biosolids products that result from the subsequent sludge treatment processes. Presently, there are two biosolids products, viz:

- Biocake – treated sludge with a dry solids content of circa 26%.
- Biofert – treated sludge which is thermally dried and has a dry solids content in excess of 90%.

Biosolids are defined in the Code of Good Practice for the Use of Biosolids in Agriculture (1999) as

"the organic by-product of urban wastewater treatment which, by being treated to an approved standard, can be used beneficially as a fertiliser/soil conditioner in agriculture".

Following the upgrade project and the introduction of phosphorus recovery from the sludge stream, there will be a third biosolids product called Struvite. The production of struvite is discussed in detail under 5.2.1.2.2 of this Planning Report and Volume 2, Section 3 of the EIAR.

All material produced from the wastewater treatment process is classified as a waste and the outputs are managed as such: e.g. treated wastewater is discharged to the environment under authorisation of the EPA, whilst the biosolids are managed to land using Nutrient Management Plans assessed and monitored by local authorities.

6.3 Description of Proposed Upgrade Project

The following Table 8 sets out the aspects of the Proposed Upgrade Project. This illustrates the works as approved under the 2012 Approval, as revised, which is currently being progressed along with the revisions set out under the Proposed Development.

The specific drawings, which relate to the WwTP Component of the *Proposed Upgrade Project* are as follows:

Drawing no. Y15710-PL-915 – Proposed Revised Project Sheet 1 of 2
Drawing no. Y15710-PL-916 – Proposed Revised Project Sheet 2 of 2
Drawing No. Y15710-PL-17 – Proposed Development Site Plan

The specific drawings, which relate to the RBSF Component of the *Proposed Upgrade Project* are as follows:

Drawing no. Y17702-PL-003 – Existing Site Layout Plan
Drawing no. Y17702-PL-004 – Proposed Site Layout
Drawing No. Y17702-PL-005 – Existing Buildings – Elevations & Plan – to be Demolished

The accompanying planning drawings are annotated with the various aspects of the Proposed Upgrade Project at Ringsend WwTP which are summarised below under Table 8.

The following set of figures set out the elements of the Proposed Upgrade Project. The references contained within each figure (i.e W4 Retrofit of existing 24 SBR Tanks) are set out in more details in Table 8 below.

Figure 24: The Proposed Upgrade Project – Ringsend WwTP Site Location



Figure 25: The Proposed Upgrade Project – Wastewater Stream Upgrades (Source: Figure 3-6 of the EIAR)



Figure 26: Proposed Upgrade Project - Sludge Stream Upgrades (Source: Figure 3-7 of the EIA)

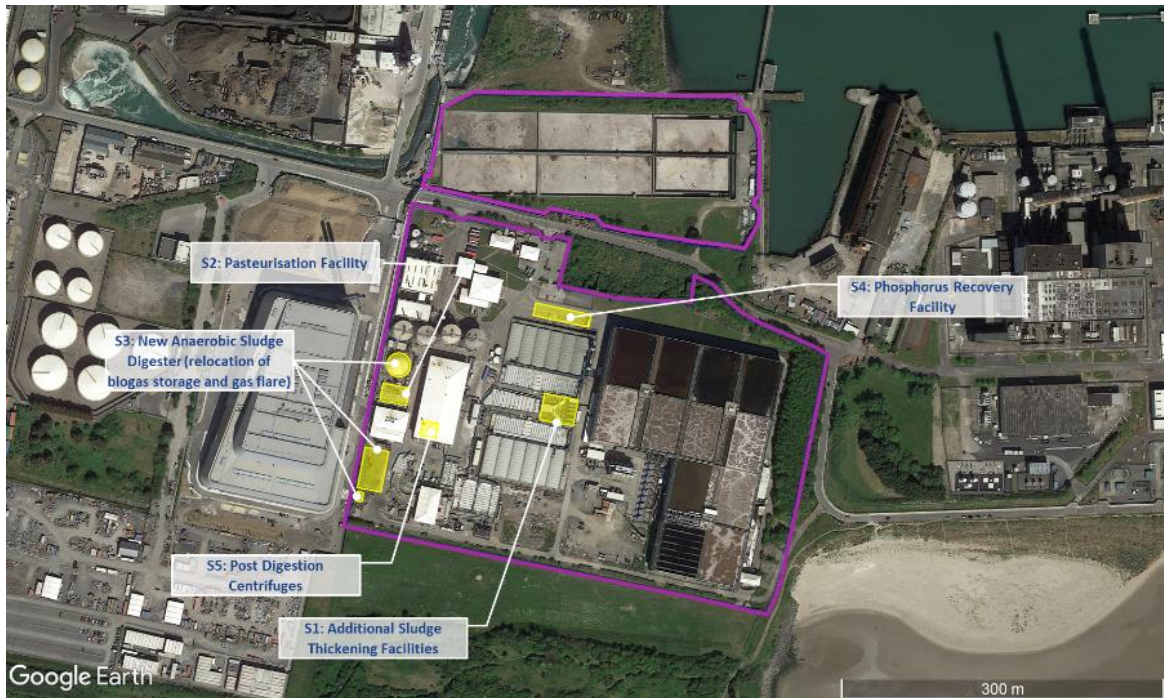
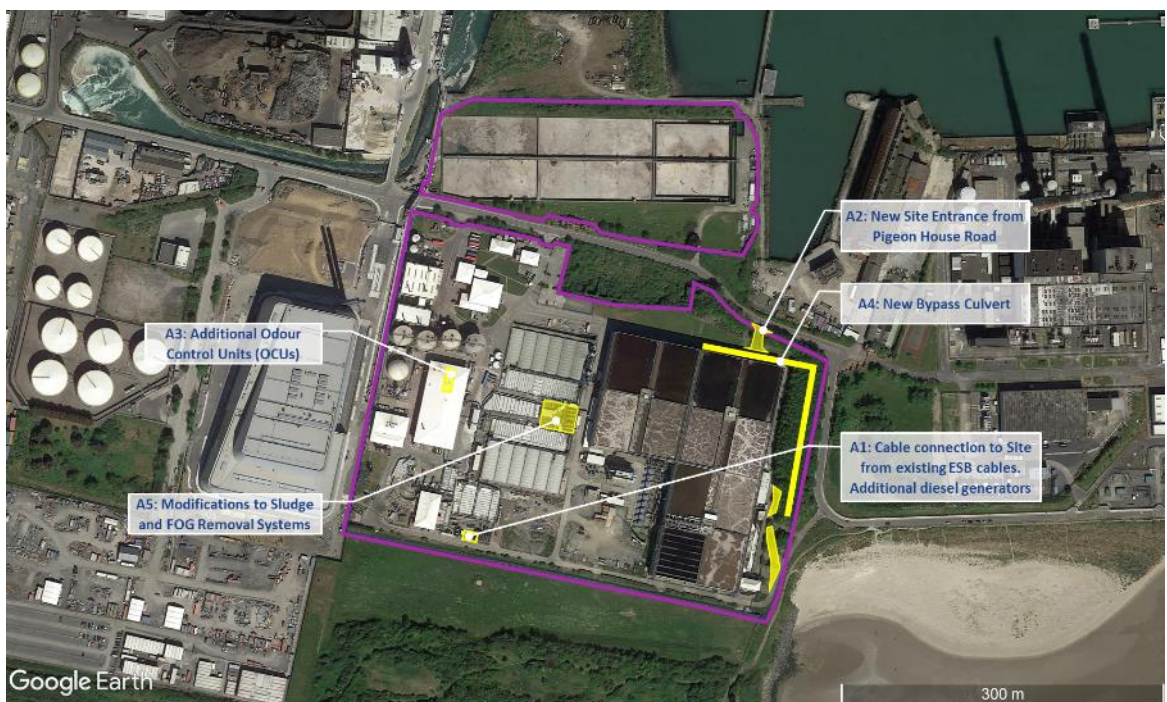


Figure 27: Proposed Upgrade Project - Ancillary Upgrades (Source: 3-8 of the EIA)



We refer ABP to Volume 2, Section of the EIAR, which sets out in detail the characteristics of construction and the programme in the context of the 'Proposed Upgrade Project'.

Table 8: Summary of The Proposed Upgrade Project

Ref	Description	Proposed Upgrade Project	
		2012 Approval	Proposed Development
1. Ringsend Wastewater Treatment Plant			
Long Sea Outfall Tunnel (LSOT)			
	9-kilometre tunnel and all associated works including the onshore inlet shaft.	X	To be omitted
Wastewater Treatment			
W1	Installation of additional pump in existing Inlet Pump Structure	X	
W2	Extend lamella packs in existing Primary Settlement Tanks	X	
W3	Additional secondary or biological treatment capacity comprising new SBR units, i.e. 6 tanks on two levels (3 on each level) Associated inlet feed pumping station - Expansion Lift Pumping Station (ELPS)	X	
W4	Reconfiguration, replacement of internal pipework and channels in up to 24 existing SBR tanks to facilitate the use of the AGS process technology		X
Drwg	Drawing no. Y15717-PL-917 Drawing nos. Y15710-PL-925 to Y15710-PL-936 inclusive.		
W5	New effluent fine screens to further improve final effluent quality	X	
W6	Installation of additional UV lamps in existing outlet channel to cater for increased flow rate		X
Drgs	Drawing no. Y15710-PL-959		
W7	Modifications to the existing Intermediate Lift Pumping Station (ILPS)		X
Drgs	Drawing nos. Y15710-PL-937 to 940 inclusive		
Sludge Treatment			
S1	Additional sludge thickening facilities	X	
S2	New Sludge Pasteurisation Building		X
Drgs	Drawing no. Y15710-PL-955		
S3	New anaerobic sludge digester	X	

Ref	Description	Proposed Upgrade Project	
		2012 Approval	Proposed Development
S4	New phosphorus recovery facility building		X
Drwg	Drawing no. Y15710-PL-917 Drawing no. Y15710-PL-951 to 953 inclusive		
S5	Post Digestion Centrifuges	X	
Ancillary Facilities			
A1	Electrical Upgrade –Connection of existing ESB power cables to site Additional diesel generators		X
Drgs	Drawing no. Y15710-PL-917 and 950		
A2	Construction access onto Pigeon House Road and haul road with accommodation works (i.e. small bund removal)	X Site entrance approved for construction period	X Proposed that Site entrance and haul road with accommodation works be retained on a permanent basis
Drgs	Drawing no. Y15710-PL-969 to 977 inclusive		
A3	Provision and upgrade of odour control facilities at the inlet works and sludge facilities to ensure compliance with odour standards	X	
A4	New bypass connection from final effluent culvert to existing connection to storm tanks		X
Drgs	Drawing no. Y15710-PL-957		
A5	Modification to the sludge and fats oils grease (FOG) removal systems in the existing primary settlement tanks (PSTs).		X
The works to be carried out also include interconnecting pipework, pumps, valves and associated chambers; upgrades of existing equipment, as well as related provision for upgrades of electrical, instrumentation and control systems (including SCADA) and the reconfiguration, where relevant of internal site roads and underground utilities			
Construction Compounds (Temporary)			
C1	Compound C1 currently approved on a temporary basis until 2021 as approved by S146B Ref No. 29N.YM004. A pedestrian path connecting C1 with the Ringsend WwTP which takes place across the adjoining SPA.	X	Extend temporary usage until December 2028
C2	C2 currently approved on a temporary basis until 2021 as approved by S146B Ref No. 29N.YM004.	X	Extend temporary usage until December 2028

Ref	Description	Proposed Upgrade Project	
		2012 Approval	Proposed Development
C3	C3 currently approved on a temporary basis until 2021 as approved by S146B Ref No. 29N.YM004.	X	
	Compound Long Sea outfall		To be omitted
Drwg	Drawing nos. Y15710-PL-960 to 965 inclusive		
2. Regional Biosolids Storage Facility			
Ref	Description	Proposed Upgrade Project	
		Proposed Development	
	Provision of 2no. biosolids storage buildings, each approximately 50m wide, 105m long and 15m in height, including solar panels on the roof of one building.		X
Drwg	Drawing nos Y17702-PL-007 to 010 Drawing no Y17702-PL-012		
	Mechanical and electrical control building.		X
Drwg	Drawing no. Y17702-PL-004.		
	Demolition of existing single storey structures on site comprising of a security kiosk , the weighbridge kiosk, an ESB sub-station and an administration building , together with the partial removal of existing internal roads and partial removal / modification of existing infrastructure as appropriate to accommodate the development.		X
Drwg	Drawing no. Y17702-PL-005.		
	Provision of 4no. odour control units, each with discharge flues.		X
Drwg	Drawing no. Y17702-PL-004. Drawing No. Y17702-PL-022.		
	Provision of a single storey site administration building for office, welfare facilities and meeting rooms and associated staff car parking.		X
Drwg	Drawing no. Y17702-PL-004.		
	Use of the existing vehicular access off the R135, including provision of new 2.7m high entrance gates to serve the Regional Biosolids Storage Facility.		X
Drwg	Drawing no. Y17702-PL-004 and 024.		
	All ancillary landscape and site development works, including: Provision of 2no. new weighbridge facilities		X

Ref	Description	Proposed Upgrade Project	
		2012 Approval	Proposed Development
	Provision of new ESB sub-station. Landscaping and boundary treatments, including new 2.7m high boundary to North Road/R135. Provision of fire protection holding tank. Provision of a HGV cleaning and set down area. Formation of new footpath and landscaped verge to R135 along site frontage. Provision of drainage, water, external lighting, and other utilities. Diversion of 450mm surface water pipe.		
Drwg	Drawing no. Y17702-PL-004 – Proposed Site Layout. Drawing nos. Y17702-PL-013 to -025 inclusive		

7 PRE-PLANNING CONSULTATIONS

The proposed Upgrade Project put forward for consideration has been informed by extensive consultation undertaken throughout the scoping stage of the EIA. The details of meetings with various statutory bodies, non-statutory bodies, stakeholders and the general public are outlined in the following sub-sections.

7.1 WwTP Component

7.1.1 Pre-Application Consultation

Pre-planning consultation occurred between Irish Water and ABP with respect to development of the Ringsend WwTP. In this context, the Proposed Development and Proposed Upgrade Project was discussed and agreed at the pre-planning meetings described below.

7.1.1.1 An Bord Pleanála

Under Section 37B (1) of the Act, the prospective Applicant is required to enter into pre-application consultation with ABP in relation to development specified in the Seventh Schedule of the Act.

Having regard to this requirement, nine pre-application consultation meetings were held between ABP and Irish Water. The dates of these meetings are set out under Table 9.

Table 9: Dates of pre-application meetings held with An Bord Pleanála

Name of Consultee	Date
An Bord Pleanála – Meeting No. 1	22 September 2015
An Bord Pleanála – Meeting No. 2	9 December 2015
An Bord Pleanála – Meeting No. 3	16 February 2016
An Bord Pleanála – Meeting No. 4	22 July 2016
An Bord Pleanála – Meeting No. 5	15 December 2016
An Bord Pleanála – Meeting No. 6	15 March 2017
An Bord Pleanála – Meeting No. 7	2 June 2017
An Bord Pleanála – Meeting No. 8	21 September 2017
An Bord Pleanála – Meeting No. 9	30 January 2018

In line with the application requirements for SID projects, copies of the Minutes of these Meetings prepared by ABP are available at ABP offices.

In addition to the Irish Water meetings, further pre-application discussions were held by ABP with Dublin City Council (11 January 2016) and the Environmental Protection Agency (EPA) (3 February 2016) separately. These meetings formed part of ABP information gathering exercise, which sought comments from Dublin City Council and the EPA in relation to the Proposed Development. These meetings identified the relevant issues around certain key environmental factors relating to proper planning and sustainable development for the area.

7.1.1.2 Dublin City Council

The Applicant has also undertaken ongoing engagement with Dublin City Council. The formal introduction of the project was presented to Dublin City Council on 4 August 2015. This meeting, and subsequent meeting, as listed in Table 10, informed the scope of the planning application and EIAR.

Table 10: Dates of pre-application meetings held with Dublin City Council

Name of Consultee	Date
Dublin City Council – Planning Department	4 August 2015
Dublin City Council – Planning Department	8 Feb 2016
Dublin City Council – Planning Department	12 April 2016.
Dublin City Council – Planning Department	7 October 2016
Dublin City Council – Planning Department	31 October 2017
Dublin City Council – Planning Department	8 February 2018

In addition, various departments have been engaged with, namely:

- Planning Department;
- Environment Department;
- Water Services Department;
- Parks Department;
- Roads and Traffic Planning Department;
- Bathing Water Section;
- Heritage Officer; and
- Conservation Officer

The topics relevant to the environmental impact assessment process, and shown in Table 11, were raised during the consultations with Dublin City Council:

Table 11: Dublin City Council headline items

Environmental Headline Item	Description	Outcome
General	Support the proposed sewage treatment capacity expansion and the provision of adequate infrastructure to allow for sustainable growth.	This has been reflected in the Need for the scheme, and in the Population and Human Health Sections of the EIAR.
General	Senior Planner in the Conservation Section, Biodiversity Officer would be key DCC figures in the assessment of any application to ABP.	Dublin City Council will be a statutory consultee and issued with the EIAR for inspection.
Biodiversity	New cSAC at Rockabill to Dalkey and UNESCO Biosphere designation for Dublin Bay since the 2012 permission was granted.	The newly designated sites have been included within the scope of the Volume 3 Section 5 - Biodiversity Marine and more specifically in Natura Impact Statement
Water	Project needs to ensure that it will not negatively impact Bathing Water Quality Standards in Dublin Bay.	The newly designed sites will adhere to the Bathing Water Quality Standards. The AGS technology in the newly designed site will result in improved levels for e-coli and Total Suspended Solids, resulting in

Environmental Headline Item	Description	Outcome
		improved UV disinfectant performance. Volume 3, Section 4 provides detail on water quality impacts

7.1.2 EIAR Scoping Consultation

As part of the continued scoping of appropriate environmental impacts, Irish Water conducted a comprehensive period of statutory public consultation between 14 March 2016 and 17 May 2016 for the WwTP Component. Irish Water issued a copy of the Scoping Report to both prescribed bodies and key stakeholders during the Scoping stage of the project. It is included in Appendix 2A of the EIAR.

The prescribed bodies and key stakeholders that were contacted in respect of the WwTP component of the Proposed Upgrade Project are outlined in Table 12.

Table 12: Prescribed bodies and key stakeholders – Ringsend WwTP

Prescribed Bodies & Key Stakeholders	
Minister for Transport, Tourism and Sport	National Transport Authority
Minister for Communications, Climate Action and Environment	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 Housing, Planning and Local Government	The Heritage Council
Minister for Culture, Heritage and the Gaeltacht	An Comhairle Ealaíon
Inland Fisheries Ireland	Fáilte Ireland
An Taisce	Planning Authority – Dublin City Council
Planning Authority – Meath County Council	Planning Authority – Dún Laoghaire-Rathdown County Council
Planning Authority – Kildare County Council	Planning Authority – Fingal County Council
Irish Aviation Authority	Minister for Jobs, Enterprise and innovation
Birdwatch Ireland	Commission for Energy Regulation (now Commission for Regulation of Utilities)
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	Dublin Airport Authority
Office of Public Works	Geological Survey of Ireland

7.1.3 Public Consultation and Open Days

In addition to the formal engagement with prescribed bodies and stakeholders alike, public open days, online information and a direct phone line facilitated the provision of information relating to the Proposed Development.

During the period between 14 March 2016 and 17 May 2016, Irish Water ran a media outreach campaign through the Irish Water Press Office and also developed a website for the Ringsend Wastewater Treatment Plant Upgrade Project (<https://www.water.ie/projects-plans/ringsend/>) where a copy of the Scoping Report was located along with relevant information.

A regular eZine Newsletter was circulated to interested parties and updates on the project are provided on <https://www.water.ie/projects-plans/ringsend/> throughout this EIA Process.

Public Consultation open days were also held in Ringsend, Dun Laoghaire, Killiney, Clontarf, and Sutton. The times and dates of these events are listed in Table 13.

Table 13: Ringsend WwTP Public Consultation Open Days

Location	Venue	Day, Date	Time
Sutton	Marine Hotel Sutton Cross, Dublin 13	Thursday, 21 st April 2016	10am – 2pm
Clontarf	Clasac Centre, Alfie Byrne Rd, Dublin 3	Thursday, 21 st April 2016	4pm – 7pm
Ringsend	Shelbourne Park Stadium, South Lotts Road, Ringsend	Friday, 6 th May 2016	2pm – 8 pm
Killiney	Fitzpatrick Castle Hotel, Killiney Hill Road, Killiney	Tuesday, 26 th April 2016	10am – 2pm
Dun Laoghaire	Royal Marine Hotel Marine Road, Dun Laoghaire	Tuesday, 26 th April 2016	4pm – 8pm

In the above public consultation, submissions by nearby residents and the wider public were received. The issues raised in these submissions made for the WwTP Component are detailed in Appendix 2C of the EIAR. The range of topics have been summarised and grouped under particular headline items, as shown in Table 14.

Table 14: Public Consultation headline items

Ringsend WwTP		
Environmental Headline Item	Description	Outcome
Water	A number of concerns were raised in relation to water, including concerns about any potential negative impacts on the quality of the sea water and impacts on marine life. There were concerns in relation to the impact of any additional wastewater flows from the plant. It was expressed in a number of submissions that any impacts should be monitored.	Water Quality addressed in Volume 3 Section 4 Water of the EIAR.. Potential impacts on marine biodiversity addressed in Volume 3 Section 5
Biodiversity	Queries and questions on the flora and fauna of the surrounding environment	Potential Impacts on Biodiversity Fauna addressed in Volume 3 Section

Ringsend WwTP		
Environmental Headline Item	Description	Outcome
	was highlighted in several submissions, with particular emphasis on the Brent Geese habitat. It was expressed that there is a need to monitor and safeguard against any potential negative impacts on the biodiversity of the area.	5, (Marine) and Section 6 (Terrestrial) of the EIAR.. A Natura Impact Statement has also been prepared and submitted as part of this planning application.
Population and Human Health	A number of submissions received pertaining to the health of the population in relation to air quality and water quality. Disruptions to the public were also a key concern in many submissions and these related to potential noise, vibration, main water, gas, electricity and traffic disruptions. Submissions recommended detailed mitigation measures to be prescribed and regular monitoring during construction and operation.	Particular impacts that have the potential to be associated with human health are provided under relevant environmental headings. Potential Human Health impacts are considered in Volume 3, Section 3 of the EIAR. Mitigation measures are detailed in the sections of Volume 3 relating to Air and Climate (Section 8), Noise and Vibration (Section 9), Material Assets (Section 12) are summarized in Volume 3, Section 17 of the EIAR.
Land and Soils	A query was made as to where the extra sludge will go and if this will be dealt with in the planning application.	Waste water sludge is processed, treated and turned into Biosolid, for re-use on agricultural and sivicultural lands. This is addressed in Volume 4, Section 19.5 of the EIAR.
Air and Climate	Concerns were expressed in relation to what odours might come from the plant and how this would affect the public.	A dedicated Odour chapter has been prepared as part of this EIAR. See volume 3, Section 10 of the EIAR.
Climate	The environment was evident in many submissions and it was felt by many that any potential negative impact on the environment should be minimised and monitored.	Potential Climate impacts are identified and addressed in Volume 3, Section 8 of the EIAR.
Landscape and Visual	Several submissions were concerned that the plant would have a visual impact on the area. Queries were raised about the choice of Ringsend as the location for the plant.	Potential Landscape and Visual Impacts have been described and assessed in Volume 3, Section 14. Potential alternatives to the project are described and assessed in Volume 2, Section 4 of the EIAR.
Cumulative & Indirect Impacts	Queries were raised in a number of submissions about the direct and indirect impacts of the plant and the potential effects that the plant would have over time on the surrounding area.	Potential cumulative and indirect impacts are described and assessed in Volume 3, Section 19 of the EIAR.
Other queries	There were a number of queries and comments in relation to the functions of the plant, the future of the plant and the engineering process. There were also a number of specific queries which included: - Operational Monitoring requirements	Potential alternatives to the project are described and assessed in Volume 2, Section 4 of the EIAR.

Ringsend WwTP		
Environmental Headline Item	Description	Outcome
	- Alternative locations for the WwTP and outfall	

7.1.4 Consultation Reports

The findings of the public consultation exercise for the WwTP Component of the Proposed Upgrade Project is compiled and presented in the *Scoping of Environmental Impact Statement & Natura Impact Statement; Report on Public Consultation*, provided in Appendix 2C of the EIAR.

7.2 RBSF Component

7.2.1 Pre-planning Consultation

7.2.1.1 An Bord Pleanála

As part of the pre-application consultations held with ABP for the Proposed Development at Ringsend WwTP and RBSF, it was agreed that the RBSF Component of the project be included within the overall scope of the EIAR and planning application.

7.2.1.2 Fingal County Council

Engagement with Fingal County Council regarding the RBSF Component began with a formal presentation of the project on 17 October 2017, which outlined the proposed project. This meeting, and further meetings, held with Fingal County Council are listed in Table 15.

Table 15: Dates of pre-application meetings held with Fingal County Council

Name of Consultee	Date
Fingal County Council – Planning Department	17 October 2017
Fingal County Council – Planning, Parks and Landscape, Traffic, Environmental Health	17 November 2017
Fingal County Council – Planning, Water Services, Environment	8 December 2017
Fingal County Council – Planning Department	2 February 2018

In addition, various Departments have been engaged with directly, namely:

- Roads
- Water Services
- Parks and Landscape
- Environment

The following topics relevant to the environmental impact assessment process were raised during the consultation with Fingal County Council.

Table 16: Fingal County Council Consultation headline items

Environmental Headline Item	Description	Outcome
Traffic	Impact on traffic at junctions near the proposed site during operation.	Traffic Volumes and associated impacts are considered in Volume 4 Section 13 of the EIAR.
Odour	Level of odour emitted during operation	Odour control mitigation measures will be employed. Odour and associated impacts are considered in Volume 4 Section 13 of the EIAR.
Water	Implementation of sustainable drainage systems (SuDS)	SuDS will be employed in the design and operation of the RBSF. This is considered in Volume 4 Section 4 of the EIAR..
Water	Containment of spills or washout of stored biosolids material	The facility is designed to contain planned and unplanned washout from the buildings and run-off from the site. It is considered in Volume 2, Section 3 and Volume 4, Section 4 of the EIAR.
Water	Management of water in relation to vehicle cleaning facilities	The proposed design of the vehicle cleaning incorporates water saving measures and wash-down water will discharge to the foul drainage system. It is considered in Volume 2, Section 3 and Volume 4, Section 4 of the EIAR.
Water	Management of noise during operation	The proposed design incorporates features to avoid noise from vehicles and mechanical equipment. It is considered in Volume 2, Section 3 and Volume 4, Section 9 of the EIAR.
Landscape	Provision of appropriate architectural and landscape design.	Architectural designs and landscaping plans have been integrated into the design. This is considered further in Volume 4, Section 14 of the EIAR.
Climate & Energy	Provision of renewable energy supply.	Provision of Solar Panels

7.2.2 Site Selection Consultation

Irish Water undertook a site selection process to find a location for a RBSF during 2017. The process involved three stages. The stages of non-statutory public consultation to facilitate engagement were:

- Stage 1. Methodology for Site Selection
- Stage 2. Identification of Potentially Suitable Sites
- Stage 3. Identification of Preferred Site

The proposed methodology for selection of a suitable site for the RBSF was first set out in the Stage 1 Report – Site Selection Methodology which was published by the Applicant on 2 February 2017. That Report provided the background to the project and explained the proposed methodology for shortlisting potential suitable sites. In seeking feedback during the four-week consultation period

between the 2 February and 2 March 2017, the Applicant invited submissions relating to the approach to site selection, the general siting considerations and criteria set out in the report, and about additional factors that should be taken into consideration.

As the selection process progressed a shortlist of potential sites was identified. The sites and the further details of the methodology adopted in selecting them were provided in Stage 2 Report – Identification of Potential Sites. The Report was published on 11 May 2017 and the second round of public consultation, took place between the 11 May and 15 June 2017. Three public information events were held during this period. At this stage the Applicant invited submissions in relation to opinions on the five potential sites, any additional information on the potential sites to be aware of, and any other factors that be considered in choosing the preferred site.

The Stage 3 Report – Identification of Preferred Site was published on the 29 August 2017 in conjunction with the scoping report for the EIAR and NIS. The purpose of the Stage 3 Report was to identify the preferred site for the proposed RBSF and to outline the methodology that had been adopted to identify it. A third round of consultation took place from 29 August 2017 to 10 October 2017. At Stage 3, the Applicant asked was there any additional information on the preferred site to be aware of and for opinions on the indicative layout of the preferred site. As described in the next section, the Applicant also asked for opinions on the proposed methodology for the assessment of environmental impacts and for any other factors that should be considered in assessing the environmental impact of the project.

In addition to the formal engagement with prescribed bodies and stakeholders alike, public open days, online information and a direct phone line facilitated the provision of information relating to the site selection process for the RBSF Component of the Upgrade Project.

During the non-statutory public consultation periods for the RBSF, a website was set up by the Applicant (<https://www.water.ie/projects-plans/national-projects/biosolids/>) where a copy of the site selection reports along with relevant information regarding site selection process could be found.

A regular eZine Newsletter for the site selection process was also provided on <https://www.water.ie/projectsplans/nationalprojects/biosolids/>

A summary of public events at Stage 2 is provided in Table 17. The Stage 3 public consultation event was held in conjunction with the consultation on EIAR Scoping as per Table 19.

Table 17: RBSF Stage 2 Site Selection Public Consultation Open Days

Location	Venue	Day, Date	Time
Dunboyne	The Oak Centre, Maynooth Road, Dunboyne, Co. Meath	Monday 22 May 2017	1pm-7pm
Saggart	Citywest Hotel, Saggart, Co. Dublin	Wednesday 24 May 2017	1pm-7pm
Newpark	White House Hotel, Newpark, Dublin	Thursday 25 May 2017	1pm-7pm

The site selection reports are provided in Appendix 4D, Appendix 4E and Appendix 4F to Volume 2. The consultation reports for Stage 1 and Stage 2 are provided with the site selection reports.

7.2.3 EIAR Scoping Consultation

As part of the continued scoping of appropriate environmental impacts, the Applicant conducted a public consultation for the RBSF component of the Proposed Upgrade Project between 29 August 2017 and 10 October 2017. The Applicant issued a copy of the Scoping Report to both prescribed bodies and key stakeholders during the Scoping stage of the project.

The prescribed bodies and key stakeholders that were contacted in respect of the Regional Biosolids Storage Facility are outlined in Table 18.

Table 18: Prescribed bodies and key stakeholders

Prescribed Bodies & Key Stakeholders	
Minister for Transport, Tourism and Sport	National Transport Authority
Minister for Communications, Climate Action and Environment	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 Housing, Planning and Local Government	The Heritage Council
Minister for Culture, Heritage and the Gaeltacht	An Comhairle Ealaíon
Inland Fisheries Ireland	Fáilte Ireland
An Taisce	Planning Authority – Dublin City Council
Planning Authority – Meath County Council	Planning Authority – Dún Laoghaire-Rathdown County Council
Planning Authority – Kildare County Council	Planning Authority – Fingal County Council
Irish Aviation Authority	Minister for Jobs, Enterprise and innovation
Birdwatch Ireland	Commission for Energy Regulation (now Commission for Regulation of Utilities)
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	Dublin Airport Authority
Office of Public Works	Geological Survey of Ireland

7.2.4 Public Consultation and Open Day

In addition to the formal engagement with prescribed bodies and stakeholders alike, a public open day, online information and a direct phone line facilitated the provision of information relating to the proposed project.

A period of non-statutory public consultation was held between August and October of 2017 for the Regional Biosolids Storage Facility. A website for the RBSF was set up by Irish Water (<https://www.water.ie/projects-plans/national-projects/biosolids/>) where a copy of the Scoping Report along with relevant information regarding this aspect of the project can be found.

A regular eZine Newsletter for this project is also provided on <https://www.water.ie/projectsplans/nationalprojects/biosolids/>

A public consultation open day was held in Newpark, at the date and time shown in Table 19.

Table 19: RBSF Public Consultation Open Day

Location	Venue	Day, Date	Time
Newpark	White House Hotel, Newpark, Dublin	Tuesday, 12 th September 2017	1pm – 8pm

In response to further requests, additional meetings were held as follows

- Meakstown Community Council on 31 January 2018 at the Willows Football Club, Jamestown Road.
- Peter McVerry Trust on 18th April 2018 at 29 Mountjoy Square East, Dublin 1.

This consultation has enabled the project team to interact with the general public in the local and wider, whereby the team provided details regarding the project and facilitated discussion with all interested parties in attendance. Consideration has been given to the submissions, comments, and suggestions received in the preparation of the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement (NIS).

In the above public consultation, submissions by nearby residents and the wider public were received. The issues raised in these submissions made for the RBSF are detailed in Appendices 2D. The range of topics have been summarised and grouped under particular headline items, as shown in Table 14. The range of topics have been summarised and grouped under particular headline items, as shown in Table 20.

Table 20: Public Consultation headline items

RBSF		
Environmental Headline Item	Description	Outcome
Odour	The level of odour arising from the facility and the impact of this on the neighbouring community were concerns raised by several stakeholders.	The design of the RBSF is described in Volume 2, Section 3 and dedicated Odour section has been prepared as part of this EIAR - See Volume 4, Section 10.
Noise	Noise pollution from traffic to/from the facility was cited as a concern by a number of stakeholders.	The assessment of Noise, including noise surveys is provided in Volume 4, Section 10
Landscape and Visual	The size and scale of the facility, and the location of the buildings was referenced by a number of stakeholders in their submissions.	The site layout, architectural design and landscape design are described in Volume 2, Section 3. The landscape and visual impact assessment is provided in Volume 4, Section 14
Water/ Hydrology	The impact that flooding and surface water at the preferred site would have on the local environment was flagged as a concern. Feedback outlined the need to safely capture and treat any run-off water from the site, including waste water from wheel washing activity..	The design of the RBSF is described in Volume 2, Section 3, which includes an explanation of the drainage proposals. A Flood Risk Assessment has been carried out and is submitted with the planning application. The assessment of impact on Water is described in Volume 4, Section 4.
Traffic	A number of submissions questioned the routes that would be used to haul material to and from the RBSF. These related to both the routes to/from the	The assessment of impact on traffic for the RBSF, which included traffic surveys near the site, is described in Volume 4, Section 13.

RBSF		
Environmental Headline Item	Description	Outcome
	<p>source of the biosolids and to/from the spread lands.</p> <p>Meakstown Community Council noted their concerns regarding operational traffic to and from the facility in their submission. They expressed a concern that traffic would increase in and surrounding the area of Meakstown.</p>	<p>The routes to the site are shown in Volume 2, Section 3 and Volume 4, Section 13</p>

7.2.5 Public Consultation and Open Days

The *Stage 3 Consultation Report* (see Volume 2, Appendix 2D of the EIAR) compiles and present the findings of the public Consultation exercise for the RBSF component of the Upgrade Project.

7.3 Statutory Consultation

A further 7 week period for public consultation, with all plans and particulars, EIAR and NIS documentation being available for inspection at ABP offices, the offices of Dublin City Council and Fingal County Council (Blanchardstown and Swords Offices) is being provided for from 12th June 2018 to 31st July 2018. In addition, a website will be operated by Irish Water in order to provide digital viewing of all the submitted documentation as part of the application. The entire application as submitted, including the EIAR and NIS can be viewed at www.ringsendwwtpupgade.ie.

8 NATIONAL & REGIONAL STRATEGIC PLANNING CONTEXT

This Section of the Report examines the prevailing planning policies, aims and objectives governing the Proposed Upgrade Project at the Ringsend WwTP and the Regional Biosolids Storage Facility at Newtown. This Section is also addressed under Volume 3, Section 2 and Volume 4, Section 2 of the accompanying EIA. The principles of the planning & policy section applicable to the subject site are briefly summarised under Figure 28 below.

Figure 28: Diagram of the Planning Policy Framework for the Ringsend WwTP Upgrade Project



8.1 European Policy Framework

The European policy framework for the Ringsend Upgrade Project comprises the Urban Waste Water Treatment Directive and the Water Framework Directive.

8.1.1 Water Framework Directive (WFD)

The delivery of water and waste water services in Ireland takes place within the framework of EU water policy and legislation, which aims to protect public health and the water environment. The delivery of waste water treatment in such areas must be consistent with achieving the appropriate water quality for such areas which primarily relate to the protection of human health.

The overarching aim of the Water Framework Directive (WFD) is to achieve at least 'good' status for all water bodies. It aims to do so by ensuring effective water management based on river basins and catchments, and by ensuring the sustainable use of water.

The Proposed Upgrade Projects ensures that effluent discharged at the Ringsend WwTP meets the appropriate quality standards, the details of which are set out in Volume 3 Section: 4 Water.

Water Framework Directive

The Proposed Upgrade Project is compliant with the Water Framework Directive.

8.1.2 Urban Waste Water Treatment Directive

The Urban Waste Water Treatment Directive seeks to protect the environment from the adverse effects of waste water discharges through ensuring appropriate collection and treatment of waste water from urban areas before discharge of treated waste water back into the water environment.

Irish Water is responsible for the collection, treatment and discharge of urban waste water. It does so through the provision of sewerage systems to collect and transfer waste water, the treatment of this waste water in waste water treatment plants, and the subsequent discharge of treated effluent back to the water environment (i.e. rivers, lakes or the sea).

The Proposed Upgrade Project ensures that effluent discharged at the Ringsend WwTP meets the appropriate quality standards, the details of which are set out in Volume 3 Section: 4 Water.

Urban Waste Water Treatment Directive

The Proposed Upgrade Project is compliant with the Urban Waste Water Treatment Directive.

8.2 National Level Planning & Development Framework

8.2.1 National Planning Framework – Ireland 2040

The National Planning Framework (NPF) was published by the Government of Ireland in February 2018, along with the National Development Plan 2018-2027; being a 10 year National investment plan. The NPF will shape the direction of development at a national scale, and subsequently direct the Regional Assemblies in preparing the Regional Spatial & Economic Strategies (RSES); which will supersede the present Regional Planning Guidelines in due course.

The NPF set out 10 National Strategic Outcomes which inter alia: **Compact Growth** is a top priority for the plan which the NPF outlines:

"Carefully managing the sustainable growth of compact cities, towns and villages will add value and create more attractive places in which people can live and work. All our urban settlements contain many potential development areas, centrally located and frequently publicly owned, that are suitable and capable of re-use to provide housing, jobs, amenities and services, but which need a streamlined and co-ordinated approach to their development, with investment in enabling infrastructure and supporting amenities, to realise their potential. Activating these strategic areas and achieving effective density and consolidation, rather than more sprawl of urban development, is a top priority." Pg.14

In the context of this Strategic Outcome, the NPF refers to the overall Ringsend WwTP Upgrade Project in *National Strategic Outcome 9* relevant to the project, including:

"Water

*Implement the Greater Dublin Strategic Drainage Study, through **enlarging capacity in existing wastewater treatment plants (Ringsend)** and providing a new treatment plant in North County Dublin - known as the Greater Dublin Drainage Project (GDD) Project." pg. 148 (Highlights added)*

"Effective Waste Management

*Waste planning in Ireland is primarily informed by national waste management policies and regional waste management plans. Planning for waste treatment requirements to 2040 will require: **Additional sewage sludge treatment capacity** and a **standardised approach to managing wastewater sludge** and including options for the extraction of energy and other resources. (Highlights added)*

- *Biological treatment and increased uptake in anaerobic digestion with safe outlets for bio stabilised residual waste." pg.149*

The NPF therefore recognises the importance of the Proposed Upgrade Project as a piece of national strategic infrastructure to ensure the growth of Dublin occurs in a sustainable manner.

The proposed RBSF is an essential component of the Proposed Upgrade Project and forms part of Irish Water's plans to standardise the approach to managing wastewater sludge in line with the objectives of the NPF. The NPF recognises the importance of this piece of strategic infrastructure required to ensure the growth of the GDA occurs in a sustainable compact manner.

National Planning Framework

The Proposed Development at Ringsend WwTP and RBSF is in accordance with the National Planning Framework.

8.2.2 National Development Plan, 2018 - 2027

The Government has recently approved the National Development Plan, 2018-2027. This provides a 10 year investment plan which aligns with the objectives of the National Planning Framework – Ireland 2040 (NPF) that was published by the Government in February 2018.

As noted above, the NPF includes *National Strategic Objective 9* which provides for both the enlarged capacity at the Ringsend WwTP and also the introduction of a standardized approach to managing wastewater sludge. The National Development Plan, 2018-2027 identifies the "*Strategic Investment Priorities 2018-2027*" under the *National Strategic Objective 9* relating to "*Sustainable Management of Water and other Environmental Resources*". Here it states that: -

"Investment in our country's water services is critical in meeting the needs of our growing economy across the regions, of our people and their health and the protection and enhancement of the quality of our environment and ensures public health.

1. *Water Infrastructure Irish Water Investment Programme*
2. *Eastern and Midlands Water Supply Project*
3. *Greater Dublin Drainage Project*
4. *Rural Water Investment Programme"*

Under *National Strategic Objective 9* on page 83 of the National Development Plan, 2018-2027 it identifies that "*€8.5 billion will be invested by Irish Water over the period of the National Development Plan*". It then goes on to list a number of specific projects, including:-

"Ringsend Waterwater Treatment Plant (WTP) project: This €190 million project will provide further capacity to support development in the Greater Dublin Region"

Under 'Waste Management and Resource Efficiency' under *National Strategic Objective 9* on page 85 of the National Development Plan, 2018-2027 it states that:-

"Investment in waste management infrastructure is critical to our environmental and economic well-being for a growing population and to achieving circular economy and climate objectives"

National Development Plan

The Proposed Development at Ringsend WwTP and the RBSF are consistent with National Strategic Objective 9 of the National Development Plan.

8.2.3 Water Services Strategic Plan – A Plan for the Future of Water Services (2015 – 2040)

In October 2015, the Water Service Strategic Plan (WSSP) was adopted by the Ervia Board and was subsequently approved at the time by the Minister for Environment, Heritage and Local Government, as set out under Section No. 33 of the Water Service No. 2 Act of 2013. The WSSP, identified as a high level (Tier 1) plan within Irish Water's Plans and Projects, sets out the direction of Irish Water over a 25-year timeframe identifying a series of more detailed, Tier 2 & Tier 3 plans. The specific objectives in the provision of water services and the means to achieve this objective of the plan over the next 25 years are listed as (inter alia):

- Provide Effective Management of Wastewater;
- Invest in Our Future;
- Challenges and Strategic Priorities;

The WSSP indicates the urgent need to resolve issues in the quality of our water services and in the integrity of the infrastructure. In this regard, the WSSP prioritised six current areas, which are required to be urgently addressed including (inter alia) 3 areas as follows:

1. Reducing Drinking Water Quality Problems
2. Achieving Compliance with the Urban Wastewater Treatment Directive
3. Catering for Growth

In terms of providing effective management of wastewater, the WSSP outlines 3 focused aims as follows:

WW1: *"Manage the operation of wastewater facilities in a manner that protects environmental quality."*

WW2: *"Manage the availability and resilience of wastewater services now and into the future."*

WW3: *"Manage the affordability and reliability of wastewater services."*

As part of the WSSPs strategic aim under wastewater management, compliance with the UWWT Directive is considered a priority for Irish Water. It is noted that the Ringsend Treatment Plant forms a crucial part of this compliance whereby:

"The upgrading of the Ringsend wastewater treatment plant will make a significant contribution to Ireland meeting its obligation under the UWWTD and increasing our compliance rate." pg.44

The Ringsend Wastewater Treatment Plant is identified as a case study under Chapter 8 of the WSSP, with the titled objective 'Invest in Our Future' which outlines that:

"Expansion and upgrading of the Ringsend Wastewater Treatment Plant is an urgent priority for Irish Water and a revision to the approved scheme to achieve required outcomes at least cost is currently being evaluated in partnership with Dublin City Council. Irish Water is proposing an innovative wastewater treatment technology for the upgrade and this innovative solution can result in a higher treatment standard to the benefit of Dublin Bay and a cost saving of €170 million compared to previous projects proposals." pg. 85

Irish Water, in accordance with the WSSP considers that the Proposed Upgrade Project, forms a key part of delivering innovative wastewater treatment under objective WW2. The scheme, while also costing less, will be more resilient than the original scheme in addition to compliance with WW3 ensuring objectives of the UWWTD is delivered in accordance with WW1.

Irish Water Services Strategic Plan – A Plan for the Future of Water Services (2015 - 2040

The Proposed Development at Ringsend WwTP and RBSF is in accordance with the aims of the WSSP and is a crucial contributor to the delivery of wastewater infrastructure.

8.3 Supplementary National Level Framework

8.3.1 National Wastewater Sludge Management Plan (2016 – 2041)

In accordance with the objectives of Irish Water's WSSP, a National Wastewater Sludge Management Plan (NWSMP) aims to ensure that the management of wastewater sludge over the

next 25 years is standardised nationwide. This Plan was published in September 2016. The objectives of Irish Water, outlined under page 5 of the NWSMP are:

To avoid endangering human health or harming the environment;

- 1. To maximise the benefits of wastewater sludge as a soil conditioner and source of nutrients;*
- 2. To ensure that all regulatory and legislative controls are met, and due regard is taken of non-statutory Codes of Practices and industry guidance;*
- 3. To establish long term, secure and sustainable disposal routes and outlets;*
- 4. To ensure cost-effective and efficient treatment and reuse/disposal techniques;*
- 5. To reduce potential for nuisance from sludge transport and sludge facilities;*
- 6. To extract energy and other resources where economically feasible.*
- 7. To drive operational efficiencies, e.g. through use of Sludge Hub Centres.*

The process at the wastewater treatment plant generates sludge which then requires further treatment to produce a biosolids by-product suitable for land spreading as fertilizer on agricultural lands. This further treatment will occur at Ringsend WwTP prior to being transported to the RBSF. In the operation of the Proposed Upgrade Project the subject of this planning application, the biosolid by-product is stored prior to being collected to be used for land spreading as fertilizer on agricultural lands.

As set out in Section 7.3.5 Sludge Storage Facilities of the NWSMP there is a requirement for storage of sludge being used for land spreading during the periods when application of fertilisers to land is prohibited in accordance with S.I. 31/2014 European Union (Good Agricultural Practice for Protection of Waters) Regulations 2014, as amended by S.I. 134/2014 and S.I. 463/2014. In order to ensure storage requirements for sludge are met nationally, additional sludge storage facilities are required to facilitate the predicted increase in wastewater sludge as new and upgraded treatment plants are completed.

Sludge Storage Facilities will no longer be considered solely on a per-plant or per-county basis. Where appropriate, Sludge Storage Facilities will be developed to serve a number of local plants and/or a wider regional need. In particular, the upgrade to the Ringsend WwTP and the proposed GDD Project will result in a significant increase from current sludge volumes with a consequent increase in storage requirements. Therefore, a dedicated sludge storage facility should be developed in conjunction with the expansion of Ringsend to meet its requirements and take account of other future needs in the region.

The need for increased storage capacity is identified in Section 7.4.8 of the NWSMP which details that the Sludge Hub Centre in Ringsend will be retained and upgraded, as necessary, during the upgrade of the wastewater treatment plant. Due to space limitations on the site in Ringsend, any such storage facilities are required to be located at a separate site to the existing wastewater treatment plant site.

As part of the proposed application, a new RBSF is to be developed. Volume 2, Section 2: Proposed Development and the entire Volume 4 outlines the specific environmental aspects relating to this new facility.

National Wastewater Sludge Management Plan (2016 – 2041)

The Proposed Development at Ringsend WwTP and associated Regional Biosolids Storage Facility is in accordance with the National Wastewater Sludge Management Plan.

8.3.2 River Basin Management Plan for Ireland 2018 - 2021

The River Basin Management Plan for Ireland 2018-2021 (RBMPI) sets out a range of actions aimed at moving towards the objectives of the EU Water Framework Directive (WFD) at a national level. This re-arrangement will lead to a standardised approach to assessments and reporting. Further incorporated into the structure, regionalised administrative structures are in place to support and carry out the implementation of the National Plan (e.g. river basin district characterisation).

In terms of the Ringsend WwTP, it is located in Dublin City area of the Liffey Catchment. In terms of transitional waters, the current status (2010-2015) of the Liffey Estuary Lower remains 'moderate' and the coastal water of Dublin Bay has a 'good' status.

The intention of the RBMPI is to achieve or maintain a 'good' status for both by 2027.

The proposed upgrade to the Ringsend WwTP, is identified (pg. 146) as an upgrade to be undertaken in support of compliance with the requirements of the UWWTD.

The Proposed Upgrade Project and the improvement in effluent quality will result in improvements to the water quality of the receiving waters of the Liffey Estuary and Dublin Bay and as such is consistent with the objectives of the RBMPI.

The Proposed Plan intends to bring forward the objectives, status and strategies from the previous plans. As outlined above, the Proposed Development at Ringsend WwTP is consistent with these objectives.

River Basin Management Plan for Ireland 2018 – 2021

The Proposed Development at Ringsend WwTP is in accordance with the RBMPI.

8.4 Regional Level Planning & Development Framework

8.4.1 Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022

The Regional Planning Guidelines (RPGs) for the Greater Dublin Area (GDA) provide a long-term sustainable planning framework for the GDA. The GDA area covers 7 no. Local Authorities, namely Dublin City, Dún Laoghaire-Rathdown, Fingal, South Dublin, Kildare, Meath and Wicklow. The Guidelines have a statutory basis in the Planning and Development Act 2000, as amended ensuring Local Authorities, in the formulation of the Development Plan Core Strategy, incorporate these guiding framework principles. This provides a strategic context for Development Plans and in turn creates a co-ordinated investment in the provision of essential Infrastructure.

The RPGs for the GDA are currently under review and will be replaced by new Regional Spatial & Economic Strategy (RSES) for the Eastern & Midland Regional Assembly (EMRA) for the period of 2018 - 2030. Initial Public & Stakeholder Consultation Issues Paper was published in November 2017 which facilitates public submissions and ends on 17th February 2018. In this regard, the RPGs remain the appropriate regional policy framework document until such time the RSES EMRA is adopted.

The RPGs note that the wastewater treatment network in the GDA is a mix of one major facility (at Ringsend) serving an area mostly comprised of the Metropolitan Area. The plan identifies that existing provision has only kept pace with the levels of growth. In this regard, the plan states that:

"the need for investment in new treatment facilities to serve the GDA is both pressing an immediate as key existing facilities and networks are reaching capacity." pg. 128

In order to meet the future needs of the GDA, in recognition of the existing capacity, the strategy of the RPGs as outlined under Section 6.5.1 of the plan, Strategic Policy Physical Infrastructure Policy 3 (PIP3), seeks to:

"Protect and work to improve water quality in, and impacted by, the GDA and seek that investment in water and surface water treatment and management projects is prioritised to support the delivery of the economic and settlement strategy for the GDA through the coordinated and integrated delivery of all essential services supporting national investment"

In achieving this policy, Table 11 titled – 'Critical Strategic Projects – Wastewater & Surface Water' identifies 10 critical projects needed to address PIP3. In terms of the Proposed Development, Water Treatment Investment Priority 1 states that;

"Expansion of the Ringsend Waste Water Treatment Plant to ultimate capacity"

The scope of this priority is to service the Metropolitan Area of the GDA in the context of these RPG's. While Local Authorities and the Department of Housing, Planning, Community and Local Government are the principal agencies, Irish Water have subsumed this role after the adoption of the RPGs. Irish Water have the responsibility of delivering water infrastructure nationwide and the Proposed Development seeks to realise Critical Strategic Policy PIP3, particularly priority 1.

In achieving the strategic approach to infrastructure, the RPGs are guided by the population targets identified under the NSS. The policies, objectives and key infrastructural projects use such figures, amongst other things, in the determination of a project's scale and timely delivery. The direction of the RPGs, guided by the NSS, rely on accurate population targets in the provision of services. The population targets for the RPGs for the GDA 2010 – 2020 are illustrated under Table 21.

Table 21: Regional Population Targets 2010, 2016 and 2022, Table 4, pg. 82 of the RPGs

	2008	2010	2016	2022
Dublin	1,217,800	1,256,900	1,361,200	1,464,200
Mid-East	514,500	540,000	594,600	649,700
State	4,422,000	4,584,900	4,997,000	5,375,200

As outlined under Volume 4, Section 3 of the EIAR, the 2016 population figures for the GDA are in line with the figures in the GDA. This continued population increase provides justification towards maximising the treatment capacity of the Ringsend project, ensuring that the current and future infrastructural requirements of the GDA are achieved.

This will make sure that wastewater generated in the region, as 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 Proposed Development of the RBSF is required to ensure that the Ringsend WwTP can operate to its maximum potential and to cater for the needs of the region. The Proposed Development, needed to deliver the Proposed Upgrade Project is in accordance with Policy PIP3 - Priority 1 of the RPGs. In combination with the WSSP, the Proposed Development seeks to aid delivery of development for the wider GDA development area.

Regional Planning Guidelines for the Greater Dublin Area, 2010 – 2022

The Proposed Development is in accordance with the Regional Planning Guidelines for the Greater Dublin Area, 2010 – 2022.

8.4.2 Eastern-Midlands Region Waste Management Plan 2015 - 2021

Waste Management Plans are statutory planning documents which set out the policies for the development of waste treatment infrastructure and sit on the same tier as the City and County Development Plans as a statutory plan. In the event of a conflict arising between an objective in the waste plan and that of a City or County Development Plan, the waste plan objectives take precedence⁹. The NWSMP discussed above, sits beneath the Eastern-Midland Region Waste Management Plan (EMRWMP) 2015 – 2021 in terms of the hierarchy of waste management plans.

The strategic vision of the Waste Management Plans is to rethink the approach to managing waste, by viewing waste streams as valuable material resources. Making better use of our resources and

⁹ Section 10A (b)(i) Waste Management Act 1996

reducing the leakage of materials, as wastes, from our economies will deliver benefits economically and environmentally to the region.

Section 2.3 of the EMRWMP sets out a range of waste planning documents which interact with the EMRWMP. The NWSMP is a document which is recognised as a component of the waste plan.

Section 7.4.7 of the EMRWMP notes that the management of sludge will be co-ordinated between Local Authorities and Irish Water regarding water and waste water sludges to ensure they are managed in a safe and compliant manner. The following policies are of relevance to the proposed RBSF development:

H1: "Work with the relevant stakeholders and take measures to ensure systems and facilities are in place for the safe and sustainable management of sludges (sewage, waterworks, agricultural, industrial and septic tank) generated in the region having due regard to environmental legislation and prevailing national guidance documents, particularly in relation to the EU Habitats and Birds Directive."

Accordingly, the E includes 3no. policy actions arising from policy H1 above. Of these, policy action H.1.1 targets annual meetings between Irish Water and Local Authorities regarding their plan objectives and associated treatment options for sludge waste. The proposed RBSF is required to ensure that the Ringsend WwTP can operate to its maximum potential and to cater for the needs of the region. The biosolids by-product produced at the Ringsend WwTP (and at other WwTPs in the catchment, including the planned GDD Project) is to be stored at the proposed RBSF prior to being collected to be spread on land as a soil conditioner and fertiliser.

This represents a safe and effective method of sludge/biosolids management which is in line with the policy direction set out in the EMRWMP. Furthermore, the site for the proposed RBSF represents an effective and compatible use for this site.

Eastern-Midlands Region Waste Management Plan 2015 – 2021

The Proposed Development at Ringsend WwTP and RBSF accords with the relevant policy of the EMRWMP.

8.5 Supplementary Regional Level Framework

8.5.1 Greater Dublin Strategic Drainage Study (2005)

The Greater Dublin Strategic Drainage Study, 2005 (GSDSDS) set out the broad drainage requirements for the Greater Dublin Region. The scope of the report was to plan for the anticipated and/or assumed development of the GDA up to the year 2031 from its completion back in 2005.

The Ringsend WwTP requirements at the time were summarised as follows within the GSDSDS:

"Ringsend – The existing plant is at capacity and needs immediate expansion for short term needs to meet the requirements of the nitrogen Discharge Standards for Dublin Bay as set out in the Urban Wastewater Treatment Regulations" pg.9

The study has defined the issues facing the Region's drainage and took a strategic approach to address them:

"To relieve overloading at Ringsend WwTP, while catering for committed development to 2011 of zoned lands and resolving pollution and flooding risks within the existing networks". pg.11

"To provide for necessary ongoing development in the Greater Dublin Region, while ensuring that existing networks, Ringsend and other local WwTPs can accommodate the needs of the existing catchments to 2031". pg.192

Section 10.8 – Wastewater Treatment Strategy summarises that

"the Wastewater Treatment Strategy for the Dublin Region is in the first instance to maximise the capacity of existing facilities. This requires immediate expansion of Ringsend WwTW to its maximum capacity while engaging on an active programme of load management of existing and new non-domestic effluent loads to buy time to allow for the planning and construction of both the expansion of Ringsend and new regional drainage and WwTW infrastructure."¹⁰

The Proposed Development, necessary to deliver the Proposed Upgrade Project and in particular expansion of the Ringsend WwTP to its maximum capacity within the confines of the site, is a key strategy of the GSDSDS as highlighted above.

Greater Dublin Strategic Drainage Study 2005

The permitted capacity expansion is a specific objective of the study. The proposed application does not alter the permitted capacity increase at the Ringsend WwTP. The Proposed Development continues to comply with the findings of this Study.

8.5.2 Greater Dublin Drainage Strategy: Overview & Future Strategic Needs Asset Strategy (May 2018)

The original GSDSDS was approved by the seven Local Authorities in the Greater Dublin Area in 2005 and established a strategy to deal with the expanding demands placed on the drainage network in the catchment.

In January 2014, Irish Water assumed responsibility for the provision of public Water Services previously provided by thirty four Local Authorities. Prior to January 2014, Local Authorities provided water and wastewater services within the resources available to them, largely autonomously within their functional areas, and with limited cross boundary strengthening linkages between adjacent schemes. The operational heritage of Local Authorities on the transferred assets is invaluable and in managing continuity of service, Irish Water has entered into Service Level Agreements with Local Authorities for the operation of Irish Water's assets for the next twelve years.

The transfer of water services functions to Irish Water provided a unique opportunity to take, for the first time in Ireland, a strategic view of providing water services, at a national level, and also on projects which are strategic for Ireland. The findings of this Overview prepared internally by Irish Water of the Greater Dublin Drainage Strategy is a result of this. This Overview does not represent a statutory document and was not subjected to public consultation or strategic environmental assessment because this Overview does not seek to replace the GSDSDS. It does however serve to provide an updated perspective on the 2005 assumptions which guided the GSDSDS¹¹.

In 2017, Irish Water carried out an internal company review of the GSDSDS having regard for the current loadings on WwTPs in the Greater Dublin region as well as future growth in the region. The findings of the review are outlined in the Irish Water document - *Greater Dublin Drainage Strategy Overview & Future Strategic Needs* (May 2018). This report accompanies this planning application. The review examined 2016 Census data, CSO Regional Population Projections and a Demographic Study carried out in 2014 by Irish Water as a part of the Water Supply Eastern and Midlands Region Project. In particular it updated the GSDSDS projections for the 12 year's passage of time and extended the design horizon from 2031 to 2050. The review concluded that the projected loading on the Ringsend WwTP will reach the site capacity of 2.4 million PE between 2024 and 2027 depending on the actual growth realised in the catchment. Accordingly, Irish Water is continuing to progress plans for the Greater Dublin Drainage (GDD) WwTP in north Dublin in accordance with

¹⁰ Page 125, *Greater Dublin Strategic Study*, April 2005

¹¹ A digital copy of the GSDSDS is available at: <http://www.greaterdublindrainage.com/wp-content/uploads/2011/11/GSDSDS-Final-Strategy-Report-April-051.pdf>

the recommendations of the GDSDS. It is intended that the additional capacity will be constructed at GDD by 2024, together with provisions for intercepting the Blanchardstown Catchment (9C) and part of the North Fringe Catchment and transferring these flows to the new GDD WwTP.

Greater Dublin Drainage Strategy Overview & Future Strategic Needs (May 2018)

The proposed application does not alter the permitted capacity increase at the Ringsend WwTP. The Proposed Development continues to comply with the findings of this internal review.

9 LOCAL PLANNING CONTEXT

The Proposed Development comprises 2no. parts. The first is located within the Administrative boundary of Dublin City Council. The second part is located within Fingal County Council functional area. The specifics of each part and the respective local planning guidance are discussed in turn below.

9.1 Statutory Local Framework - Ringsend Wastewater Treatment Facility

9.1.1 Dublin City Council Development Plan 2016 – 2022

The Dublin City Development Plan 2016 – 2022 (hereinafter: DCDP) provides the primary local statutory planning policy framework for development for the subject site. It has regard to the higher level national and regional strategic guidelines outlined in the above-mentioned points of this Section. Under the plans current format, there is no local area plan provision for the subject site, nor is there a proposed plan in place, however, the proximity of the site to the adjoining designated Poolbeg West Strategic Development Zone (Poolbeg SDZ) and the interaction is noted below. The following policies, objectives and development standards of the City Development Plan that are of relevance to the Proposed Development are set out below.

9.1.1.1 Core Strategy

The Core Strategy is intended to set out the key strategies for the administrative area of Dublin City in line with the growth targets set out in the Regional Planning Guidelines for the Greater Dublin Area.

As set out under Section 2.3.7:

"The efficient and timely delivery of necessary infrastructure capacity in advance of the planned quantum of development is a prerequisite for successful urban development. Ensuring the delivery of this infrastructure in a sustainable manner, which enhances the quality of the city's environment and facilitates the sustainable economic growth and co-ordinated development of the city, is also an essential requirement." (pg. 34)

The provision of the Proposed Upgrade Project will provide wastewater infrastructure that is essential to accommodate the planned growth of the City (and its wider catchment) and therefore will facilitate the targets set out in the Core Strategy being achieved.

Dublin City Development Plan Core Strategy

The provision of the Proposed Upgrade Project will provide the wastewater infrastructure that is essential to accommodate the planned growth of the City (and its wider catchment) and is therefore in accordance with the Core Strategy.

Policy Support - Sustainable Environmental Infrastructure

The policy support for the Proposed Development at the Ringsend WwTP is set out in great detail in Section 9.5.1 (page 146) of the Written Statement of the Dublin City Development Plan, 2016-2022 (the Development Plan). The expansion of the Ringsend WwTP, as noted in Chapter 9 – Sustainable Environmental Infrastructure, Section 9.5 – Policies and Objectives of the Development Plan, is specifically acknowledged as an urgent priority for Irish Water and for the development of the Dublin Region. The Development Plan outlines that it is intended to upgrade and expand the treatment works to its maximum capacity.

The City Council is committed to working closely with and supporting Irish Water in the provision and maintenance of adequate public water and wastewater infrastructure throughout the city.

The relevant planning policy considerations contained within the Development Plan which support the Proposed Upgrade Project at the Ringsend WwTP include the following policies:

SI1: *"To support and facilitate Irish Water in the provision of high-quality drinking water,*

water conservation, and in the development and improvement of the water and wastewater systems to meet anticipated demands for clean and resilient water supplies and wastewater requirements for the city and region, all in accordance with the recommendations set out in the 'Greater Dublin Water Supply Strategic Study' and 'The Greater Dublin Strategic Drainage Study' (pg. 146)

SI2: *"To support and facilitate Irish Water to ensure the upgrading of wastewater infrastructure, in particular the upgrading of the Ringsend Wastewater Treatment Plant, and to support the development of the Greater Dublin Regional Wastewater Treatment plant, the North Docklands Sewage Scheme, the 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." (pg. 146)*

SI3: *"To ensure that development is permitted in tandem with available water supply and wastewater treatment and to manage development, so that new schemes are permitted only where adequate capacity or resources exists or will become available within the life of a planning permission." (pg. 146)*

It is clear that the Proposed Upgrade Project is explicitly supported by Policy SI1 and SI2, and enables the available capacity for the development objectives under the DCDP (SI3). Following on from the above policies, the Objectives of the Council are:

SI01: *"To support Irish Water in the implementation of the 'Water Services Strategic Plan – A Plan for the Future of Water Services' (pg. 146)*

SI02: *"To work closely with Irish Water to identify and facilitate the timely delivery of the water services required to realise the development objectives of this plan." (pg. 146)*

SI05: *"To protect existing wayleaves and buffer zones around public water service infrastructure." (pg. 148)*

Policy Support – Sustainable Environmental Infrastructure

The Proposed Development required to deliver the Proposed Upgrade Project is in accordance with Policy support for Sustainable Environmental Infrastructure - SI1 and SI2 and objectives under SI01.

Policy Support - Natural Watercourses & Water Quality

Volume 3, Section 4 – Water examines the details of the Proposed Development and its potential impacts on water quality. In terms of policy relating to water quality, we refer to that section in the first instance, however, the following policies and objectives are noted under the Development Plan.:

SI4: *"To promote and maintain the achievement of a least good status in all water bodies in the city." (pg. 149)*

SI5: *"To promote the enhancement of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems." (pg.149)*

SI6: *"To promote the protection and improvement of the aquatic environment, including through specific measures for the progressive reduction or cessation of discharges and emissions." (pg.149)*

Following on from the above policies, the Objectives of the Council are:

SI06: *"To implement the European Union Water Framework Directive through the implementation of the appropriate River Basin Management Plan and Programme of Measures." (pg. 149)*

SI07: *"To take into consideration the relevant River Basin Management Plan and Programme of Measures when considering new development proposals." (pg.149)*

Policy Support – Natural Watercourses & Water Quality

The Proposed Development required to deliver the Proposed Upgrade Project is in accordance with the Natural Watercourses & Water Quality objectives of the Development Plan.

Policy Support - Rivers, Canals and the Coastline

In addition,

GI17: *"To develop sustainable coastal, estuarine, canal and riverine recreational amenities to enhance appreciation of coastal natural assets in a manner that ensures that any adverse environmental effects are avoided, remedied or mitigated."* (pg.171)

Following on from the above policies, the Objectives of Dublin City Council are:

GIO17: *"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."* (pg.172)

GIO19: *"To maintain beaches at Dollymount, Sandymount, Merrion and Poolbeg/Shelly Banks to a high standard, and to develop their recreational potential as a seaside amenity, in order to bring them to 'Blue Flag' standard subject to Article 6 Assessment of the Habitats Directive."*(pg.172).

Dublin City Council's approach to Water Infrastructure is towards promoting and supporting Irish Water in line with the Greater Dublin Strategic Drainage Study in order to develop the wastewater infrastructure network throughout the city for the plan period. The Proposed Upgrade Project will assist the City Council in meeting these Objectives.

Policy Support – Rivers, Canals and the Coastline

The Proposed Upgrade Project is in accordance with the policies relation to rivers, canals and the coastline of the Development Plan.

Policy Support – Biodiversity

Specified under Section 10.5.6, titled *Biodiversity*, the following policies are of note:

GI23: *"To protect flora, fauna and habitats, which have been identified by Articles 10 and 12 of Habitats Directive, Birds Directive, Wildlife Act 1976 (as amended), the Flora Protection order (S.I. no. 84 of 1999), the Birds & Natural habitats Regulations 2010 and the European Communities (Natural Habitats) Regulations 1997 (S.I. no. 94 of 1997)."*pg. 173

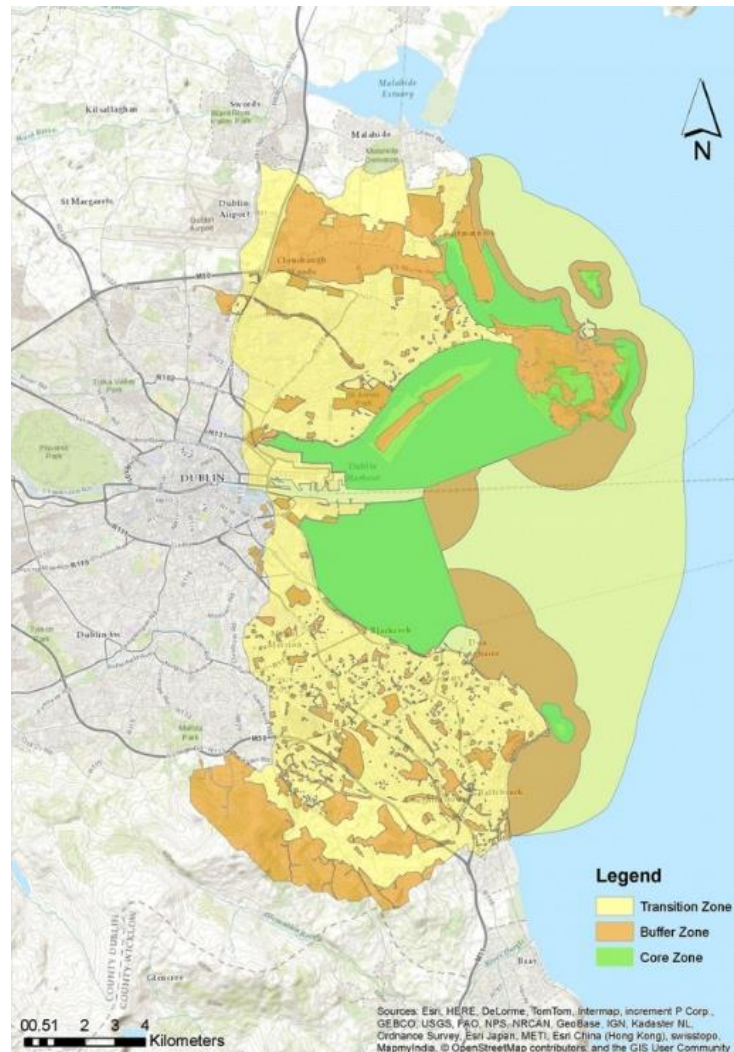
GI24: *"To conserve and manage all Natural Heritage Areas, Special Areas of Conservation and Special Protection Area designated, or proposed to be designated, by the Department of Arts, Heritage Regional, Rural and Gaeltacht Affairs."* pg. 173

GIO23: *"To support the implementation of the 'Dublin City Biodiversity Action Plan 2015 – 2020', including inter alia (a) the conservation of priority species, habitats and natural heritage features, and (b) the protection of designated sites."* pg. 174

Outlined in the Biodiversity Action Plan 2015 - 2020, the Dublin Bay area and North Bull Island are indicated to be one of the most highly designated locations in the country for biodiversity. The designations are afforded under the EU Habitat Directive and EU Birds Directive. The scope of this

action plan has informed the preparation of the Nature Impact Statement (NIS) and Volume 3, Section 5: Biodiversity Marine and Section 6: Biodiversity Terrestrial - of the accompanying EIAR.

Figure 29: The extent of the Dublin Bay Biosphere, 2015



The list of designated sites for the Dublin Bay Area and which forms part of the assessment for the Proposed Development comprise the following areas:

- South Dublin Bay and River Tolka Estuary SPA (site code 004024)
- South Dublin Bay cSAC (site code 000210)
- North Bull Island SPA (site code 004006)
- Dublin Bay cSAC (site code 000206)
- Howth Head Coast SPA (site code 004113)
- Howth Head cSAC (site code 000202)
- Dalkey Islands SPA (site code 004172)
- Rockabill to Dalkey Island cSAC (site code 003000)

The extent and interactions of the above locations and the potential impact of the Proposed Development are discussed further under Volume 3, Section 5: Biodiversity Marine and Section 6: Biodiversity Terrestrial - of the accompanying EIAR and also in the NIS.

The Proposed Development forms an essential part of the delivery of key infrastructure in the continued development of Dublin City. In combination with existing environmental features, it is considered that the proposed is in accordance with the policies and objectives outlined above.

Land Use Zoning Objective

The Ringsend WwTP facility spans across the two sites, divided by Pigeon House Road. For the most part, the facility is zoned Z7 (purple), however, along the eastern boundary of the northern site, a set down area associated with the storm tanks, is zoned Z9 (green). To the east of the southern site, there is a portion of Z9 (green). As part of the Proposed Development, temporary construction compounds will be in place for the duration of the permission. One such compound is positioned partially within lands zoned Z14 (white) and Z9 (green). The extent and scale of these zoned areas is shown in Figure 30.

Under Z7 zoning, the objective is:

"To provide for the protection and creation of industrial uses and to facilitate opportunities for employment creation including Port Related Activities".

'Public Service Installations' are a permissible use within this zoning designation as illustrated in Table 22 below. A Wastewater Treatment Plant is considered to be a Public Service Installation under the City Development Plan.

A public service installation is defined in Appendix 21 on page 240 of Volume 2 of the Dublin City Development Plan 2016-2022 as follows:-

Public Service Installation

*"A building, or part thereof, a roadway or land used for the provision of public services. Public services include all service installations necessary for electricity, gas, telephone, radio, telecommunications, television, data transmission, drainage, **including wastewater treatment plants** and other statutory undertakers; bring centres, green waste composting centres, public libraries, public telephone boxes, bus shelters etc, but does not include incinerators/waste to energy plants. The offices of such undertakers and companies involved in service installations are not included in this definition"*

(SLA Emphasis Added)

The Proposed Development at the Ringsend WwTP is therefore consistent with the Z7 zoning objective for the lands.

The proposed temporary compounds associated with the development of this project are located on lands that are zoned Z7, Z14 and in small parts Z9. These temporary compounds are an ancillary aspect of the Proposed Development. In all cases 'Public Service Installations' are types of development that are considered to be acceptable in principle as per the zoning matrix for each respective zoning.

The objective under Z9 zoning seeks:

"To preserve, provide and improve recreational amenity and open space and green networks".

'Public Service Installations' are a permissible use within this zoning designation, provided it is not detrimental to the amenity of Z9 zoned lands, as illustrated in Table 23.

In the context of the Z9 lands, it is acknowledged that the Note accompanying the Z9 zoning states, *inter alia*, that:-

"Generally, the only new development allowed in these areas, other than the amenity/recreational uses, are those associated with the open space use".

In this case, the proposed compound use is temporary only. As a result this temporary use will be removed at the end of the permission and does not conflict with the zoning objective as a result. The compound in question, C1, has recently received permission for use as a temporary construction compound (ABP Reference Number 29N.YM0004, January 2018).

The objective of the Z14 zoning is:-

“To seek the social, economic and physical development and/or rejuvenation of an area with mixed use, of which residential and ‘Z6’ would be the predominant uses”.

‘Public Service Installations’ are a permissible use within this zoning designation. The development on the Z14 lands is therefore consistent with that zoning objective, as illustrated under Table 24.

Figure 30: Land Use Zoning Map. Source Dublin City Development Plan 2016 – 2022, Map F



Land Use Zoning Matrix for the subject site

Table 22: Land use Z7 zoning matrix under the Development City Development Plan, 2016 – 2022 (SLA emphasis added)

Category	Zoning Objective – Z7
Permissible Uses	Betting office, Boarding Kennel, Car park, Chemical processing and storage, Childcare facility, Civic and amenity/recycling centre, Enterprise centre, Garage (motor repair/service), General industrial uses, heavy vehicle park, Household fuel depot, Industry (light), Open space, Outdoor poster advertising, Park and Ride facility, petrol station, Port-related industries and facilities, public house, Public service installation , Scrap yard, Storage depot (open), Support office ancillary to primary use, Transfer station, Transport depot, Warehousing
Open for Consideration	Advertisement and advertising structures, Amusement/leisure complex, Bed and Breakfast, Buildings for the health, safety and welfare of the public, Car trading, Community facility, Cruise shipping and marine services in port area, Cultural/recreational building and uses, Factory shop, Guest house, Hotel, Media-associated uses, Nightclub, Place of worship, Restaurant, Science and technology-based industry, Take-away.
Note	The majority of these lands are located in the Port area (see Chapter 4, Chapter 16 and section 16.21 of the DCDP). Generally The primary uses in these areas are those

Category	Zoning Objective – Z7
	that can result in a standard of amenity that would not be acceptable in other areas. They can sometimes lead to disamenities which would need to be managed through the planning process to safeguard residential amenity when necessary. Activities include industry, other than light industry; manufacturing repairs, open storage, waste material treatment, and transport operating services. These areas require a measure of protection from other non-compatible clean uses as this can result in conflict and limit the expansion of the primary use in the area.

Table 23: Land use Z9 zoning matrix under the Development City Development Plan, 2016 – 2022 (SLA Emphasis Added)

Category	Zoning Objective – Z9
Permissible Uses	Cemetery, club house and associated facilities, municipal golf course, open space (see Appendix 21 land use definitions of the DCDP) Public service installation which would not be detrimental to the amenity of Z9 zoned lands.
Open for Consideration	Car park for recreational purposes, Caravan park/camp site (holiday), community facility, Craft centre/craft shop, crèche, cultural/recreational building and uses, Golf course and clubhouse, Kiosk, neighbourhood retail (in accordance with highly exceptional circumstances above) tea room, café/restaurant.
Note	This zoning includes all amenity open space lands which can be divided into three broad categories as follows: public open space, private open space, and sports facilities in private ownership. The provision of public open space is essential to the development of a strategic green network. The chapters detailing the policies and objectives for landscape, biodiversity, open space and recreation and standards respectively, should be consulted to inform and proposed development (see Chapter 10 and section 16.2 of the DCDP). Generally, the only new development allowed in these areas, other than the amenity/recreational uses, are those associated with the open space use. Specifically, residential development shall not be permitted on public or privately-owned open space.

Table 24: Land use Z14 zoning matrix under the Development City Development Plan, 2016 – 2022 (SLA Emphasis Added)

Category	Zoning Objective – Z14
Permissible Uses	Betting Office, Buildings for the health, safety and welfare of the public, Childcare facility, Community facility, Conference centre, Cultural/recreational building and uses, Education, Embassy office, Embassy residential, Enterprise centre, Green/clean industries, Halting site, Home-based economic activity, Hotel, Industry (light), Live-work units, Media-associated uses, Medical and related consultants, Offices, Open space, Park and ride facility, Part off- licence, Place of public worship, Public Service Installation , Residential, Restaurant, Science and technology-based industry, Shop (neighbourhood), Training centre.
Open for Consideration	Advertisement and advertising structures, Bed and Breakfast, Car park, Car trading, Civic and amenity/recycling centre, Factory shop, Financial institution, Funeral home, Garage (motor repair/service), Garden centre, Golf course and clubhouse, Hostel, Internet café, Nightclub, Off-licence, Outdoor poster advertising, Petrol station, Pigeon lofts, Public house, Take-away, Veterinary surgery, Warehousing (retail/non-food)/Retail Park, Warehousing.
Note	These are areas, including large-scale public housing area, where proposals for comprehensive development or redevelopment have been, or are in the process of being prepared. These areas also have capacity for a substantial amount of development in developing areas in the inner and outer city. Z14 areas capable of accommodating significant mixed-use development; therefore, developments must include proposals for additional physical and social infrastructure/facilities to support same. In the case of Z14 lands that are identified for key district centres, all uses identified as permissible uses and open for consideration uses on zoning Z4 lands will be considered.

Surrounding Land Use Zoning Objectives

The Poolbeg peninsula broadly consists of three identified land use zoning objectives, namely Z7, Z9 and Z14. The urban characteristics and land use zoning objectives change to a more established residential when moving in a southerly and westerly direction starting along the Sean Moore Road.

Located at the south-west corner of the subject site is a Strategic Development & Regeneration Area (S.D.R.A) designation. The Identified S.D.R.A No. 6 – 'Docklands (including Docklands SDZ area and Poolbeg SDZ) area is zoned as Z14 which is:-

"To seek the social, economic and physical development and/or rejuvenation of an area with mixed use of which residential and "Z6" would be the predominant uses."

This S.D.R.A area to the north of the subject site extends around the Pigeon House Dock, incorporating the associated buildings and protected structures (RPS no. 6795 & RPS no. 6796). This area is severed from the primary block of the S.D.R.A area at the former Irish Glass Bottle Site. Under Statutory Instrument No. 279 of 2016, the larger Poolbeg SDZ broadly defined by Sean Moore Road to the West and south Banks road to the North was designated a Strategic Development Zone (SDZ). This is considered in more detail below.

The proposed temporary construction Compound no. 1 will be positioned along the eastern section of the proposed Poolbeg West SDZ for a temporary period of up to 10 years.

For the Poolbeg SDZ, a Planning Scheme has been prepared (discussed in more detail below) which identifies the corridor reservation for the Eastern By-Pass. Permanent development proposals are restricted in this area pending "the final routing of the Eastern By-Pass is finalised". The extent of this area is illustrated in Figure 36. The entire of the proposed temporary construction compound (Ref. C1) is located within the designated corridor reservation for the Eastern By-Pass. As such, no permanent development proposals can be proceeded with until such time as the final routing for that road is resolved. As such, the temporary use of this compound associated with the construction of the Proposed Upgrade Project is not prejudicial to the implementation of the Planning Scheme as these lands can be available to accommodate development at the appropriate time.

Land Use Zoning Objective - The Proposed Upgrade Project is in accordance with the Land Use Zoning Objectives for the surrounding area.

The Proposed Upgrade Project will also facilitate the delivery of the regeneration of the Z7 and Z14 lands at Ringsend, including the Poolbeg SDZ, as well as the regeneration lands in the city centre.

SDRA 6 Docklands (SDZ and Wider Docklands Area)

The Development Plan identifies a number of Strategic Development and Regeneration Areas (SDRA's) as areas where proposals for comprehensive development or re-development have been or are in the process of being prepared. The most suitable SDRA for the purposes of the proposed application is: SDRA 6 Docklands (SDZ and Wider Docklands Area) which is separated into three elements:

- Docklands Area
- North Lotts & Grand Canal Docks Strategic Development Zone (SDZ)
- Poolbeg West

The existing Ringsend WwTP is positioned in close proximity to Poolbeg West SDRA area. As set out under section 15.1.1.9 of the Development Plan, the Poolbeg West site shown in Figure 31 is seen by City Council as:

".. an opportunity for the city to deliver significant levels of private and public housing, employment, schools, community and recreational facilities within the life of the Development Plan"

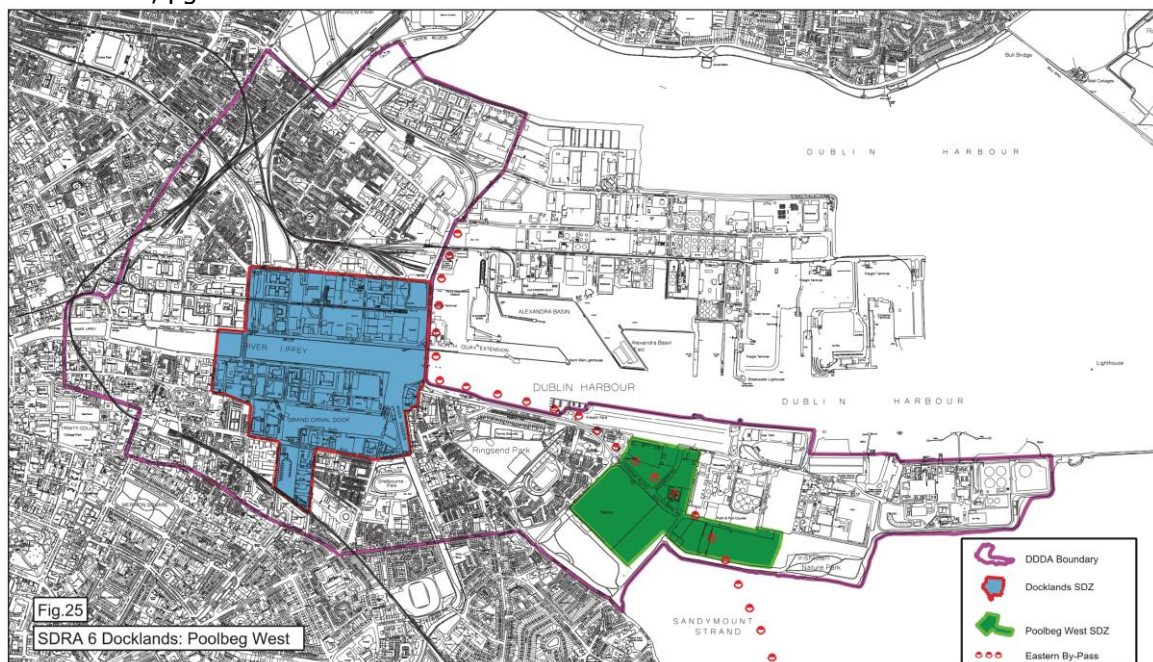
The Development Plan outlines how a masterplan will be required to demonstrate how the SDRA principles will be delivered on a phased basis. The following guidelines principles will apply:

- Social and Economic
- Use and Urban Form
- Movement and Sustainability
- Environment

The Poolbeg SDZ has recently been designated a Strategic Development Zone (SDZ) and a Planning Scheme for these lands in line with these guiding principles was made by resolution by Dublin City Council on 2nd October 2017 (and is currently on appeal to ABP) Further details in relation to this Planning Scheme document are outlined under Section 9.1.2 below.

South Bank Road, which runs along the east boundary of the S.D.R.A area forms part of the primary route onto the Pigeon House road from which the Ringsend facility is accessed. During the construction phase, Shellybanks road will form the main construction access to the site. Additional access along the South Bank Road provides access to Compound no. 1. Specific Traffic details are outlined under Volume 3 Section 13 Traffic of the accompanying EIAR.

Figure 31: Extent of the Docklands SDRA location (Purple), source Dublin City Development Plan 2016 – 2022, pg. 273



The alignment of the road objective for the Eastern By-Pass crosses through the Poolbeg West lands. According to the SDRA 6 map, the road objective does not pass through the Ringsend WwTP site.

The Proposed Upgrade Project is in accordance with the Development Plan objectives under SDRA 6 Docklands (SDZ and Wider Docklands Area).

The Proposed Upgrade Project will also facilitate the delivery of the regeneration of the Z7 and Z14 lands at Ringsend, including the Poolbeg West SDZ, as well as the regeneration lands in the city centre.

Built Heritage

The existing Ringsend WwTP incorporates particular built heritage. From the outset, we refer ABP to the extent of such structures, and the interactions with the Proposed Development under Volume 3, Section 11, titled Cultural Heritage of the accompanying EIAR. In short, these comprise:

- Remnants of Pigeon House Fort (Ref. No. 6794) is included in the Record of Protected Structures as per Appendix 24 of the DCDP and is situated partly within the application site.
- The area around the Pigeon House Harbour, to the east of the site, is designated as a Conservation Area under the Development Plan as identified with red hatching in Figure 6-3 above.
- Located along the Pigeon House Road between the principal waste facility to the south and storm tanks to the north, is a designated Zone of Archaeological Interest.

Seveso Directive Sites

The Zoning Maps of the Development Plan identify the location of 'Seveso' designated sites with a large red dot (see Figure 32).

The Seveso designation is provided for under the European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015, commonly known as the Seveso III Directive.

It was introduced into Irish Law through the EC (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015), as amended (the COMAH Regulations)

A document entitled '*Policy & Approach of the Health & Safety Authority to COMAH Risk-based Land-use Planning (September 2009)*' sets out the policy of the Health & Safety Authority (HSA) on the land use planning requirements of the Seveso III Directive.

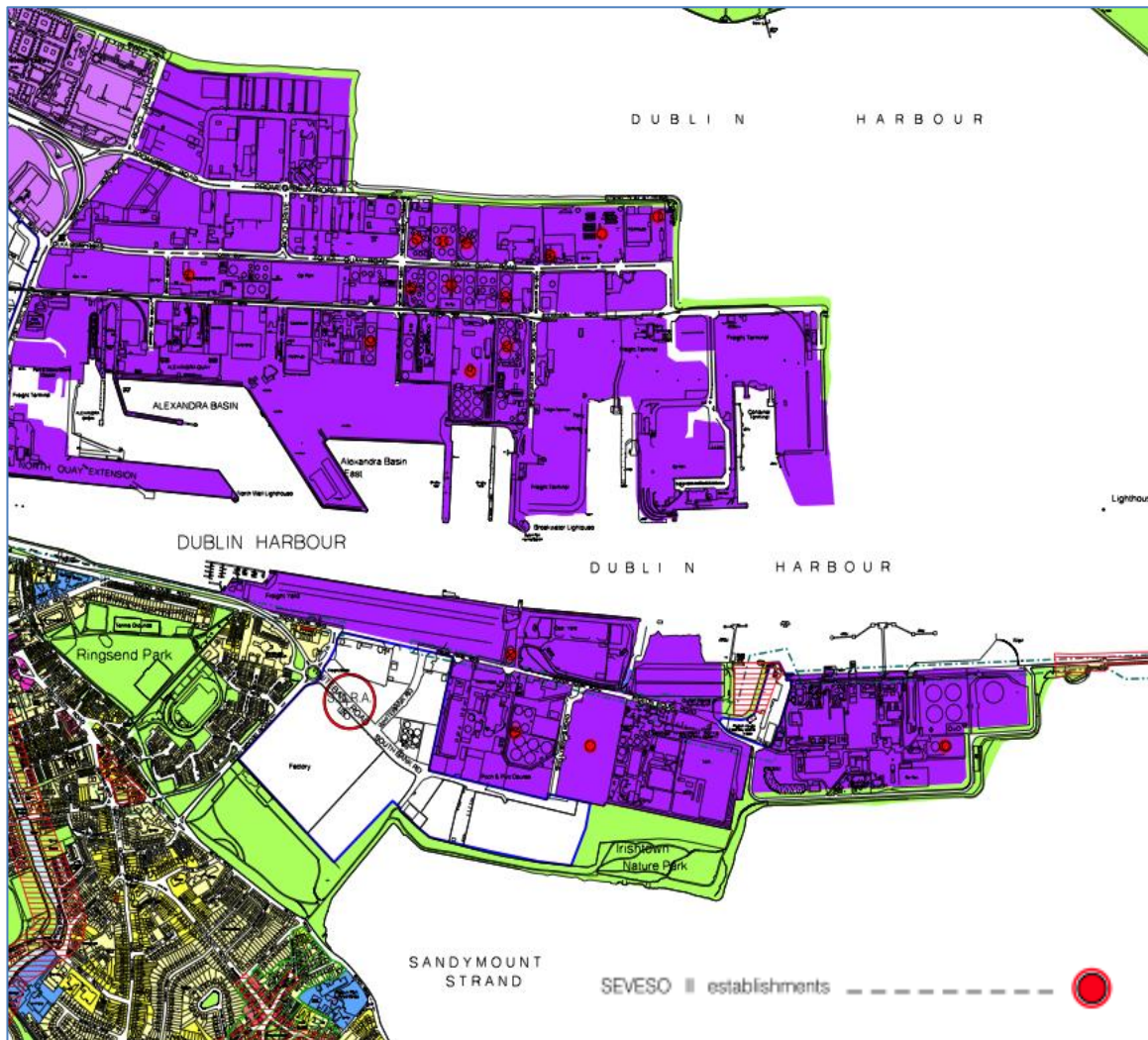
That Directive aims to prevent major accident hazards involving dangerous substances and chemicals and the limitation of their consequences for people and the environment. In this respect controls relate to:

- The siting of new establishments
- Modifications to existing establishments;
- Development in the vicinity of an establishment, which, by virtue of its type or siting, is likely to increase the risk or consequences of a major accident.

The Health & Safety Authority (HSA) provides advice to planning authorities where appropriate in respect of planning applications for development within a certain distance of the perimeter of these sites. In the case of the Seveso sites most proximate to the Ringsend WwTP, the consultation distance is 300m.

Appendix 12 of the Development Plan, outlines a list of Seveso sites in the City, including their respective 'consultation zone'. There are some activities listed in an 'Upper Tier' and others in a 'Lower Tier' of activity. Where proposals arise for development within these 'consultation zones' the COMAH Regulations place an onus on the Planning Authority to consult with the HSA regarding the proposal to ensure they are appropriate and would not cause any undue safety concerns.

Figure 32: 'Seveso' designated sites with a large red dot, Extract – Map F Dublin City Development Plan 2016 – 2022.



There are 7 no. Upper Tier Seveso Establishments within the general vicinity of the Ringsend WwTP with reference to the DCDP – Appendix 12, with only 2 of these located on the Poolbeg Peninsula (highlighted in bold below). The name, location and respective consultation zones as detailed in Appendix 12 of the City Development Plan are set out as follows;

- Calor Teoranta, Tolka Quay, Alexandra Rd. Dublin 1 (600m from perimeter)
- Dublin Waste to Energy Ltd, Pigeon House Road, Dublin 4 (300m from bund wall)
- Esso Ireland Ltd. Dublin Joint Fuel Terminal, Alexandra Rd. Dublin 1 (400m from perimeter)
- Fareplay Energy Ireland, Tankfarm 1, Alexandra Road and Tankfarm 2, Tolka Quay Road, Dublin Port, Dublin 1 (400m from perimeter)
- Indaver Ireland Ltd, Tolka Quay Road, Dublin Port, Dublin 1 (700m from perimeter)
- National Oil Reserves Agency, Ringsend Oil Storage, Pigeon House Road, Ringsend, Dublin 4 (300m from perimeter)
- Tedcastles Oil Products, Yard 2, Tolka Quay Road, Dublin Port, Dublin 1 (400m from perimeter)

The Dublin Waste to Energy Ltd facility and the National Oil Reserves Agency facilities are the most proximate Upper Tier Seveso sites to the Ringsend WwTP. The Ringsend WwTP facility is not within the consultation zone of the National Oil Reserves Agency facility, which is in excess of 300m away and therefore beyond the consultation zone in that case.

There are 8 no. Lower Tier Seveso Establishments within the port area. The Ringsend WwTP upgrade project is in proximity to only 2 of these (highlighted in bold below), with the remainder in the north Docks area around Alexandra Road and are at least 850m away across the River Liffey. Thus, the Ringsend WwTP is outside the consultation zone for those facilities. The other most proximate Lower Tier Seveso sites are identified in the list below for convenience.

- **Utility Operations & Maintenance Services Ltd. t/a Synergen Ltd., Dublin Bay Power Plant, Pigeon House Road, Ringsend, Dublin 4 (300m from bund wall)**
- **ESB Poolbeg Power Station, Pigeon House Road, Ringsend, Dublin 4 (300m from bund wall)**
- ESB North Wall Generating Station, Alexandra Road, North Road, Dublin 1 (300m from bund wall)
- Iarnród Éireann, Alexandra Road, North Wall, Dublin 1 (300m from bund wall)
- Iarnród Éireann, Iarnród Éireann Maintenance Works, Inchicore, Dublin 8 (300m from bund wall)
- Topaz Energy Ltd, Terminal 1, Alexandra Road, Dublin Port, Dublin 1 (400m from perimeter)
- Topaz Energy Ltd, Yard 3, Alexandra Road, Dublin Port, Dublin 1 (300m from perimeter)
- Tedcastles Oil Products, Yard 1, Promenade Road, Dublin 1 (400m from perimeter)

These most proximate Lower Tier Seveso sites are between 200-375m away from the boundary of the existing Ringsend WwTP. This existing relationship will remain unchanged.

Presently, there are 55 full time staff employed at the existing Ringsend facility. The most proximate Seveso site, the Dublin Waste to Energy facility, is constructed and operational immediately adjacent to the Ringsend WwTP site. The project was permitted in the knowledge and understanding that the Ringsend WwTP existed and operates with the employment levels currently in place. The Ringsend WwTP Upgrade Project will increase this employment level by approximately 15 persons.

As detailed in Volume 2, Section 3 of the EIAR, it is expected that between 50-75 construction employees will be present on site during the peak construction period revolving around the extension to the SBRs at the Ringsend WwTP.

During the 2012 Planning Application, it is noted that ABP consulted with the HSA, as the competent authority, and that the HSA did not submit a response or comment upon same. As a result, it can be concluded that the HSA did not have any objection to the proposed upgrade having regard to the Seveso sites in proximity. We note that the Health & Safety Authority will be consulted by ABP in this case also.

As part of the Scoping for this EIAR, the views of the HSA were sought during the informal public consultation process. No response was received from the HSA. Further details of this can be found at Volume 2, Section 2: The EIA Process.

The proposed Ringsend WwTP Upgrade Project is in accordance with the Development Plan objectives for Seveso.

Development Management Standards

Under the Dublin City Development Plan 2016 – 2022, there are no development management standards attributed to '*public installation services*'

There are no development management standards relevant to the Proposed Development under the Dublin City Development Plan 2016 – 2022.

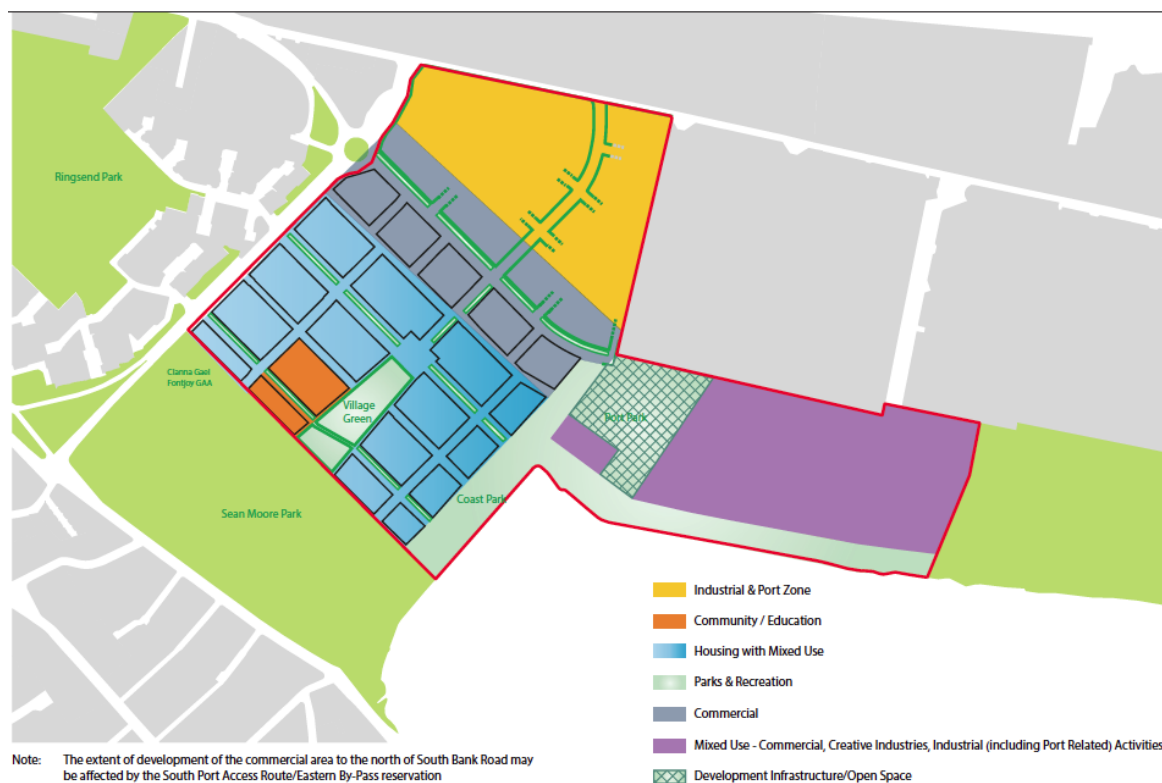
9.1.2 Poolbeg West SDZ Planning Scheme

The Poolbeg West SDZ Planning Scheme (Planning Scheme) was identified following its designation by the Government, as an area which will accommodate a mix of uses, both residential and commercial. The Strategic Development Zone is one:

"which may principally include residential development, commercial and employment activities includes, office, hotel, leisure and retail facilities, port related activities and the provision of educational facilities, transport infrastructure, emergency services and the provision of community facilities".¹²

On the 2nd October 2017, Dublin City Council adopted the Planning Scheme and covers an area of 34ha, the extent which is illustrated in Figure 33 below. At the date of writing this Report and accompanying EIAR, the Planning Scheme is on appeal to ABP following the holding of an Oral Hearing of that appeal. The location of the Ringsend WwTP site lies outside of this SDZ area. Temporary Compound C1 is partially located within the boundary of the Planning Scheme.

Figure 33: Land Uses for the Planning Scheme. Source: Figure 9.1 of the Poolbeg West Planning Scheme, dated 2nd October 2017.



The Planning Scheme is guided by the series of principles outlined under the Development Plan SDRAs policies which are summarised under above. From these points, the Planning Scheme sets out 3 key themes as follows:

1. Connect with the physical, environmental, economic and social fabric of the city, the bay and adjoining neighbourhoods.
2. Create a new sustainable urban neighbourhood that responds to the areas unique location and enhances the enjoyment of local amenities.

¹² S.I. No. 279/2016 – Planning & Development Act 2000 (Designation of SDZ: Poolbeg West, Dublin City) Order 2016, available at: <http://www.irishstatutebook.ie/eli/2016/si/279/made/en/print>

3. Protect the special status of Dublin Bay, the intrinsic functions of the port/municipal facilities and the amenity of existing and future residents.

The Planning Scheme, in its current form, intends to accommodate 3,000 – 3,500 dwelling units with a gross density of up to 238 units per hectare on lands to the south of South Bank Road. In this context, the Planning Scheme notes a potential population arising from the scheme of 8,000 persons. In addition, the Planning Scheme enables the development of 80,000 - 100,000 sq.m employment floorspace, which is noted as being equivalent to 8,000 workers. The planned distribution of land uses across the SDZ lands illustrated in Figure 30.

The envisaged land use along the north section of the South Bank Road is Industrial & Port Zone. Along the eastern section which stretches towards the existing Ringsend WwTP facility is identified for 'Mixed Use – Commercial, Creative Industries, Industrial (including Port Related) Activities'. The central and western section of the Planning Scheme is targeted to deliver the other residential, community/education, commercial, shopping and open space uses.

Based on the indicative layout and design of the Planning Scheme, the nearest residential unit (Housing with mixed use – blue area) could be interpreted to be approximately 670m from the south-west corner of the Ringsend WwTP site.

The existing Ringsend WwTP is not positioned within the Planning Scheme area or any completed section of the proposed works. However, as part of the construction of the development, a temporary compound (C1) is to be located along the eastern section of the Planning Scheme area. These lands, illustrated in purple under Figure 32 are identified as accommodating:

"Mixed Use – Commercial, Creative Industries, Industrial including Port Related Activities."

In terms of the Phasing, the Planning Scheme designates the mixed use area along the eastern section of the lands as 'B2'.

This phase of development states:-

"B2 in the SDZ are identified for Mixed Use - Commercial, Creative Industries, Industrial (including Port Related Activities). This enables a range of uses on these lands including those associated with Dublin Port and film studios, together with TV and digital content production studios. The latter uses may include the provision of sound stages, post production and digital services, workshop areas, ancillary support and administration buildings and back lot areas (outdoor storage, green landscaping)" pg.46

This particular provision was included as a Material Amendment to the Draft Planning Scheme. This Material Amendment is the subject of an appeal with ABP.

In terms of phasing, the Planning Scheme is divided into 2 no. streams. One for commercial, residential, retail and community uses along the southern portion of the Planning Scheme lands. The other is related to the port and port-related and industrial activity zonings to the north and east of the Planning Scheme.

For this zoning, the Planning Scheme envisages that:-

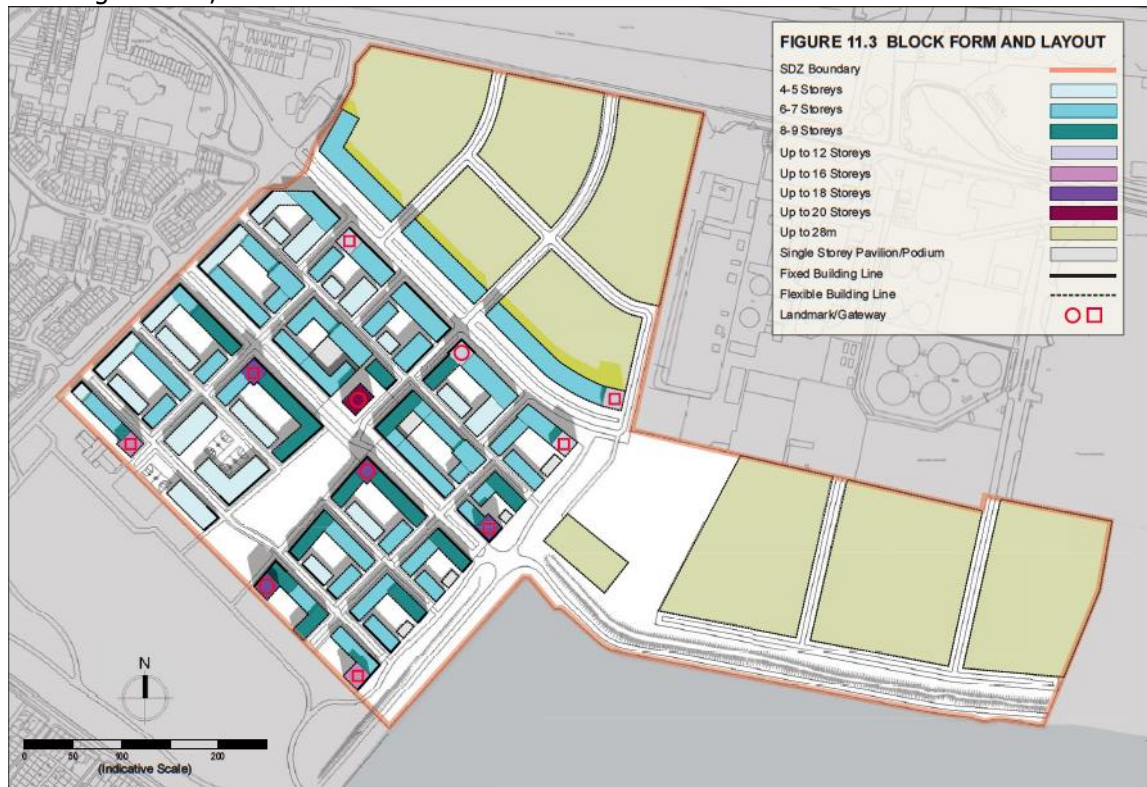
"For Block B2, this site is proposed for unitised cargo storage in the long term, with a commercial element on the western boundary facing onto the buffer park zone, which could consist of hotel, office or other commercial and/or leisure and limited retail/cafe type uses. This zone is directly impacted by the transport corridor reservation, and will be reviewed following resolution of the reservation. Meanwhile the area is proposed as a public park to provide a transition between the new residential area and the cargo storage area. Block B2 will be served by a reopened new link extending northwards to Pigeon House Road (outside the SDZ) and not westwards to South Bank Road."

Building heights will be predominantly 28 metres in height, whereby commercial buildings would reach 4 - 7 stories and up to 9 storeys for residential. The Planning Scheme specifies that mid-rise

heights (of up to 50m) can also be accommodated at a limited number of locations. These locations are identified under the Planning Scheme as areas of key open space, major access routes or viewpoints. There are a number of taller building locations identified. These accommodate buildings of up to 12 storeys', 16 storeys', 18 storeys', 20 storeys' and a single building of up to 28 metres in height.

Building heights and the indicative urban layout of the Planning Scheme is illustrated under Figure 34, which identifies the B2 lands closest to the Ringsend WwTP as an area for the potential development of up to 28m.

Figure 34: Block Form and Layout of the SDZ lands. Source: Figure 11.3 of the Poolbeg West Planning Scheme, dated 2nd October 2017.

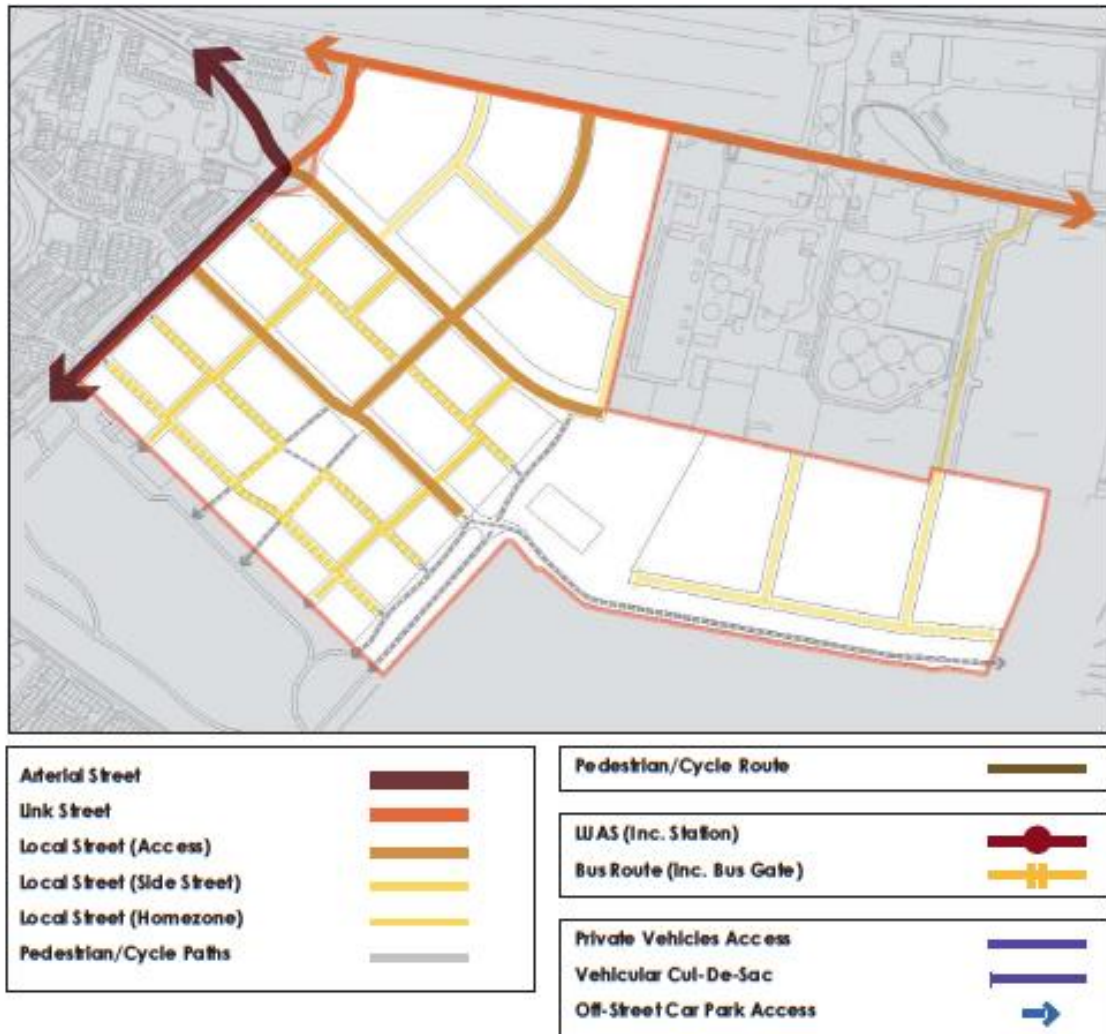


In terms of the street network, Section 11.2.1 of the Planning Scheme proposes an alternative access route to the port/industrial lands along the former alignment of the Pigeon House Road. According to the Scheme, this is to remove traffic (including HGVs) from more sensitive/more intensively developed areas of Poolbeg West. The Planning Scheme, under page 64, requires a number of junction and crossing improvements to facilitate the access to the Planning Scheme area, as follows:

- The roundabout at the junction of Sean Moore Road and South Bank Road is to be replaced with a signalised junction.
- The junction between Pine Road and Sean Moore Road is to be signalised to cater for movements to/from a new Central Boulevard.
- The junction along South Bank Road and Pigeon House Road will be signalised.
- An existing crossing adjacent to the Clanna Gael is to be moved north to align with Bremen Road
- Road and the School / Coastal Park Green Link.

According to Appendix 2 of the Planning Scheme, the proposed access to the 'B2' lands is via the existing entrance, which connects to Pigeon House Road. This is shown in Figure 35.

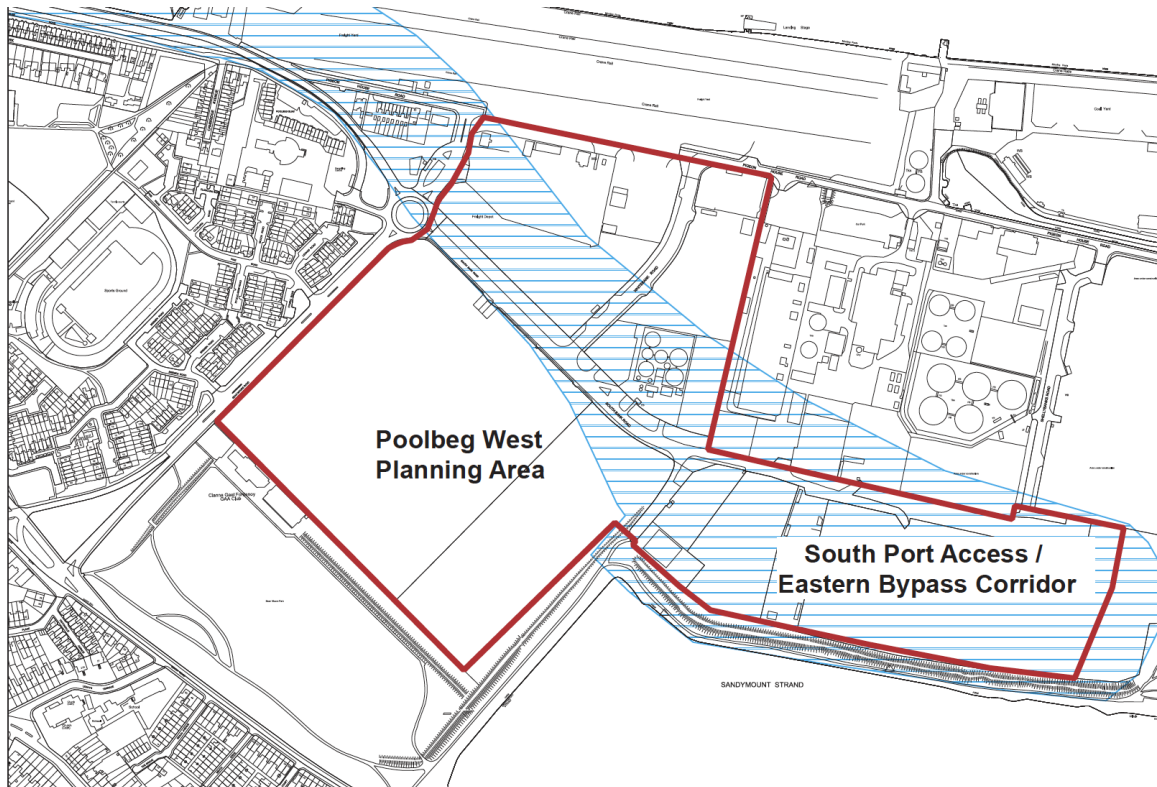
Figure 35: Street Hierarchy of the SDZ lands. Source: Appendix 2 of the Planning Scheme, dated 2nd October 2017.



Unlike the residential zone within the Planning Scheme, there is no detail regarding the quantum of uses expected to be delivered within the B1 or B2 zones.

The Planning Scheme identifies the reservation corridor for the Eastern By-Pass. Permanent development proposals are restricted in this area pending “the final routing of the Eastern By-Pass is finalised”. The extent of this area is illustrated in Figure 36. The entire of the proposed temporary construction compound (Ref. C1) is located within the designated corridor for the Eastern By-Pass. As such, no permanent development proposals can be proceeded with until such time as the final routing for that road is resolved. As such, the temporary use of this compound associated with the construction of the Proposed Upgrade Project is not prejudicial to the implementation of the Planning Scheme as these lands can be available to accommodate development at the appropriate time.

Figure 36: South Port Access/Eastern Bypass Corridor. Source: Figure 6.3 of the Planning Scheme, dated 2nd October 2017.



The Proposed Ringsend WwTP Upgrade Project, particularly the proposed temporary compound, does not prejudice the future aim & objectives of the Planning Scheme.

9.2 Local Framework - Ringsend Wastewater Treatment Facility

9.2.1 Draft Dublin Port Masterplan 2040

The Ringsend WwTP site is situated within the south quay area of the Dublin Port. The Port have prepared a Draft Masterplan 2040 (DPM) which sets out a non-statutory framework for development of Dublin Port and its activities up to 2040. As part of the DPM, the port company intends to carry out reviews with respect to the economic viability of the development options.

A period of consultation on the plan ran from the 16th April 2018 until 25th May 2018 requesting the comments and views from the public in relation to the DPM. In terms of the existing DPM, there are 8 no. Strategic objectives which underpin the masterplan which are set out as follows:

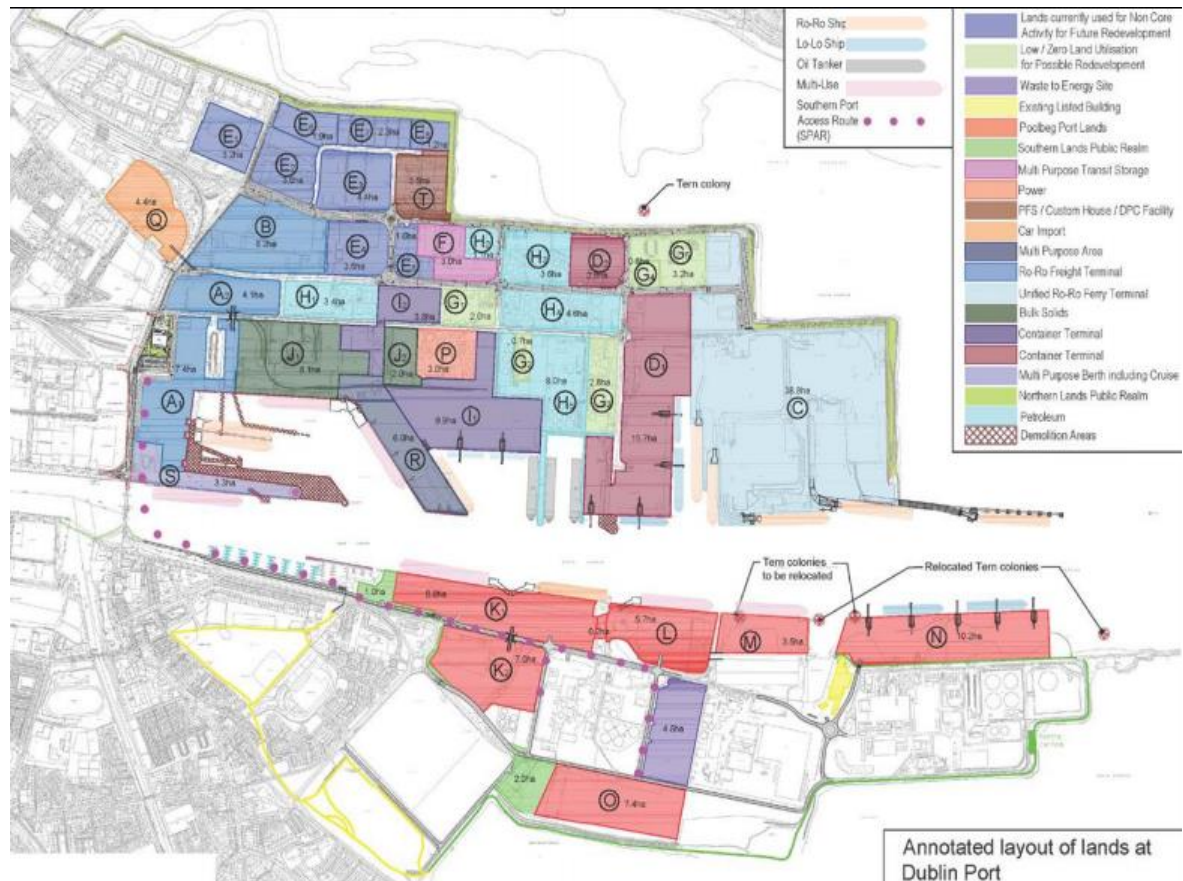
- Port Functions
- Investment and Growth
- Integrating with the City
- Movement and Access
- Environment and Heritage
- Recreation and Amenity
- Security
- Future Review

The DPM outlines a list of development options which form part of the ports capacity expansion. The plan further explains that these options are not a prescriptive menu of development but

considered to be a set of possible options which would require further assessment in relation to the demand and capacity of Dublin Port and relevant planning consent requirements.¹³

There are 2no. development options which are proposed in close proximity to the Existing Ringsend facility described as follows:

Figure 37: Draft Dublin Port Masterplan 2040 options. Source: Figure 3 of the Dublin Port Masterplan 2012, pg. 36



The development options proposed under the DPM are described as follows:

Development option M - hectares 3.5, "A new deepwater multi-purposes berth is proposed as an eastwards extension of the existing South Bank Quay." pg42

Development option N - hectares 10.7, "If the existing MTL container terminal is redeveloped for Ro-Ro, then the Port will have a shortage of container terminal for Lo-Lo.

It is proposed, therefore, that a new deepwater Lo-Lo container terminal be developed by the creation of deepwater berths along the River Liffey in front of the ESB's Poolbeg Power Station. In doing this, provision will be made to provide for the power station's cooling water intake and outfall and also for NORA's petroleum loading and offloading requirements." pg42

Given the close physical relationship between the Ringsend WwTP and the working Docks area, it is important to acknowledge the presence and indicative development proposals of this non-statutory draft Masterplan document.

¹³ Dublin Port Masterplan 2012 – 2040, Development Options, page 22.

Draft Dublin Port Masterplan 2040

The Proposed Upgrade Project does not prejudice the implementation of the Draft Masterplan 2040, published by Dublin Port.

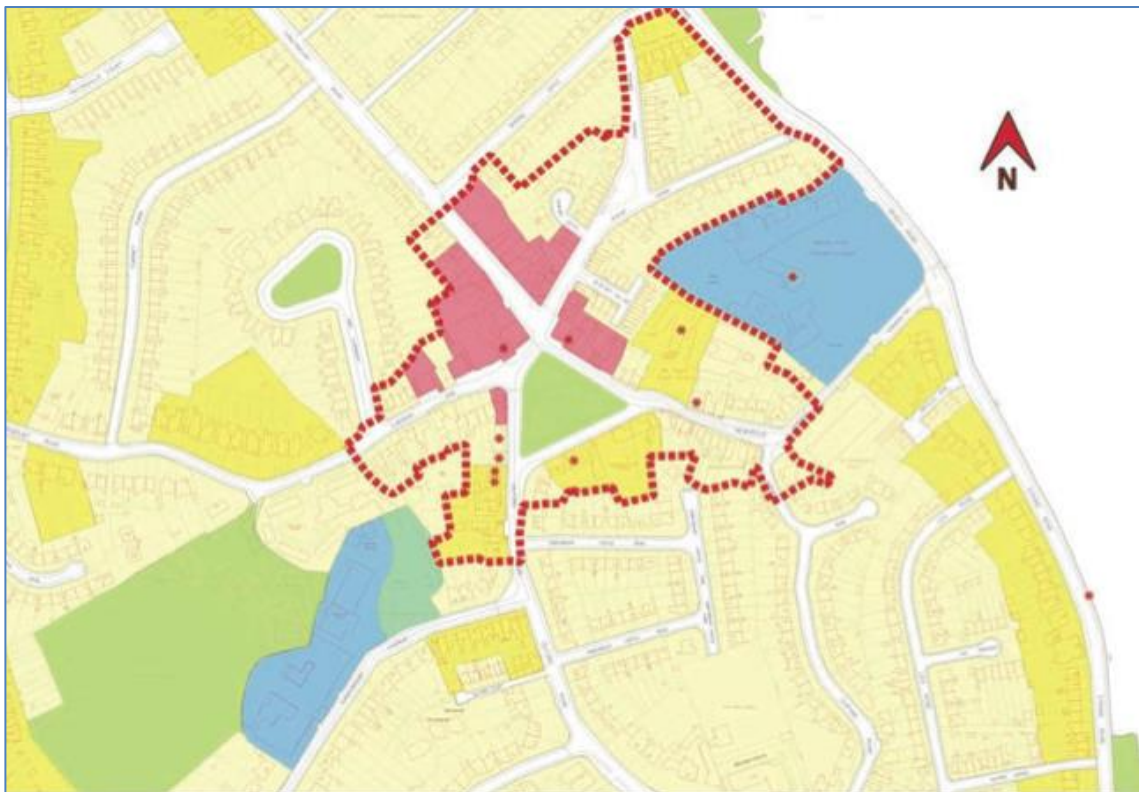
9.2.2 Sandymount Village Architectural Conservation Area Report 2013

The Sandymount Village and Environs Architectural Conservation Area (ACA) Report was prepared and adopted in 2013. The extent of the ACA can be illustrated in Figure 38 below. This is replicated in Map F of the Development Plan.

The over-arching policy of the ACA area is set out under policy POL 1, which seeks to generally protect and conserve the character and setting of the ACA ensuring development proposals will respect and complement the unique character of Sandymount Village, in line the setting of protected structures in accordance with development standards.

The Proposed Upgrade Project is in excess of c.1km north-east of the ACA and is considered not to negatively impact on the defining characteristics of the ACA or the ability to adhere to the policies and objectives of the ACA in the future. Further detail in relation to landscape is outlined under Volume 3 Section 14: Landscape of this EIAR.

Figure 38 ACA Boundary Map. Source: Sandymount ACA Document

**Sandymount Village Architectural Conservation Area Report 2013**

The Proposed Upgrade Project does not prejudice the implementation of the Sandymount Village Architectural Conservation Area, Report 2011.

9.2.3 Village Design Statement, Sandymount, September 2011

The aims of Sandymount Village Design Statement (VDS) are to:

1. Record what is distinctive and important to the residents of Sandymount to ensure these features are protected and / or enhanced through the local planning system and other relevant socio-economic programmes;
2. Devise design principles to guide future development within Sandymount and adjacent area

- which would impact on village character;
3. Provide advice and up-front guidance on local design issues to decision makers and developers;
 4. Suggest how specific projects that will benefit Village residents and their environment may be initiated;
 5. Act as a focus for the community to participate and collaborate effectively in the local planning process as well as in regard to other aspects of life in the Village.
 6. The VDS 's structure revolves around 5 principal aims which underpin the plan with identified key development areas. Upon review of the document, 'The Strand & Promenade' area is more specific to the Proposed Development whilst acknowledging the wider objectives of the plan.

The shared vision for 'The Strand & Promenade' area is listed as being:

1. The location of the Village on the edge of the wide expanse of Dublin Bay allows wide sea views and the feeling of 'openness', which is an important aspect of Sandymount's sense of place.
2. Views across the sands, including views of the Poolbeg chimneys, is a positive feature, and development that would diminish these views is not generally favoured.
3. Concerns were also raised about potential developments that might affect the sea wall and areas of soft sand used by families.

In recognition of its contribution to Sandymount's cultural and natural heritage, it is an objective of the VDS to retain the Strand and sea wall as a primary visual and recreational amenity for residents and visitors, page. 20. The principle objectives for the area include inter alia:

'Pedestrian links should be improved between the strand and Sean Moore Park, and via the Nature Walk to Irishtown Nature Park and the Great South Wall. '

The VDS identifies the next steps to be taken in line with the above objectives, indicating that the current direction, as highlighted as project 5, is to address the Flood Risk and Preservation of the Sea Wall and Martello Tower. It is indicated that a project brief is outlined in order to establish a working group considering the flood issues and a proposed feasibility study for flood protection. Furthermore, it is noted that: the potential issues that are likely to occur in the area include inter alia: preservation of coastal amenity, e.g. views, beach access, footpath, etc.; and the preservation of pedestrian amenity alongside cyclists and vehicular traffic.

With specific reference to the Volume 2, Section 3 – Description of the Proposed Upgrade Project, and Volume 3 Section 14: Landscape, the Proposed Upgrade Project is not considered to prejudice the provision of the pedestrian link to the adjoining natural amenities outlined under the 'The Strand and Promenade' in the future as the Proposed Upgrade Project does not interfere with the existing coastal walkway linking the Great South Wall, Irishtown Nature Park and Sean Moore Park.

Village Design Statement, Sandymount, September 2011

The Proposed Upgrade Project does not prejudice the implementation of the Sandymount Village Architectural Conservation Area, Report 2011.

9.3 Statutory Local Framework – Regional Biosolids Storage Facility

9.3.1 Fingal County Council Development Plan

The Fingal County Development Plan 2017 – 2023 (FCDP) provides the primary local statutory planning policy framework for the Regional Bio-solids Facility (RBSF). It has regard to the higher level national and regional strategic guidelines outlined under Section 7. There is no requirement for a Local Area Plan in this case. The following policies, objectives and development standards of the FCDP that are of relevance to the proposed RBSF development are set out below.

9.3.1.1 Core Strategy

The Core Strategy is intended to set out the key strategies for the administrative area of Fingal County in line with the growth targets set out in the Regional Planning Guidelines for the Greater Dublin Area (GDA).

As set out under Section 2.6 of the FCDP:

"The emphasis of this Plan is to continue to consolidate the existing zoned lands and to maximise the efficient use of existing and proposed infrastructure." (pg. 35)

The Proposed Development at the RBSF will be required to ensure that the Proposed Upgrade Project can operate efficiently and effectively. The development as combined will provide the wastewater infrastructure that is essential to accommodate the planned growth of the wider GDA and is therefore in accordance with the Core Strategy. A separate planning application is being made for the Greater Dublin Drainage (GDD) project, which also forms part of the required infrastructure to cater for the planned growth of the wider GDA.

Fingal County Development Plan Core Strategy

The Proposed Development at the RBSF is in accordance with the Core Strategy of the Fingal County Development Plan 2017 – 2023.

Policy Support for the RBSF

Fingal County Council is committed to working closely with and to support Irish Water in the provision and maintenance of adequate public water and wastewater infrastructure throughout the county.

It is a Strategic Policy consideration contained within the FCDP to support the necessary upgrading of wastewater infrastructure:

"Work with Irish Water to secure the timely provision of water supply and drainage infrastructure necessary to end polluting discharges to waterbodies, comply with existing licences and Irish and EU law, and facilitate the sustainable development of the County and the Region."

It is clear that the Proposed Development at the RBSF supports the timely provision of drainage infrastructure which will in turn support the ability of the Ringsend WwTP to operate effectively thus facilitating the sustainable development of the County and the Region.

Following on from the above strategic policy, the Objectives of the Council are:

Objective WT03: *"Facilitate the provision of appropriately sized and located waste water treatment plants and networks including a new Regional Wastewater Treatment Plant and the implementation of other recommendations of the Greater Dublin Strategic Drainage Study, in conjunction with relevant stakeholders and services providers, to facilitate development in the County and Region and to protect the water quality of Fingal's coastal and inland waters through the provision of adequate treatment of wastewater." (p. 263)*

The above Objective, as set out in the FCDP, supports the development of appropriate infrastructure including waste water infrastructure and associated proposed RBSF which will support the proper and sustainable growth of the County.

Policy Support – Wastewater

The Proposed Development at the RBSF is in accordance with the Policies for Wastewater under the Fingal County Development Plan 2017 – 2023.

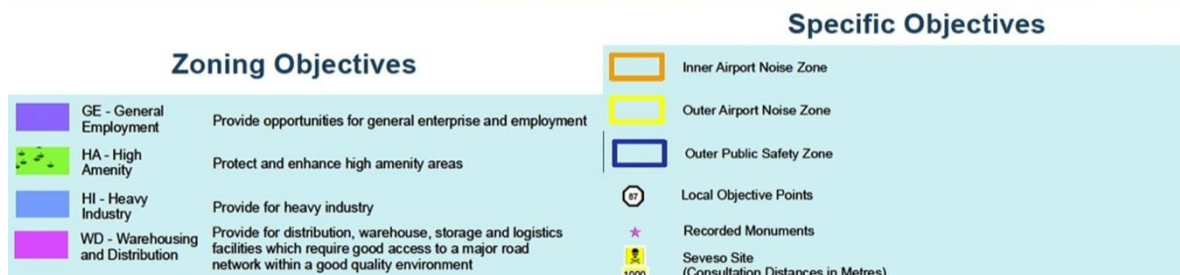
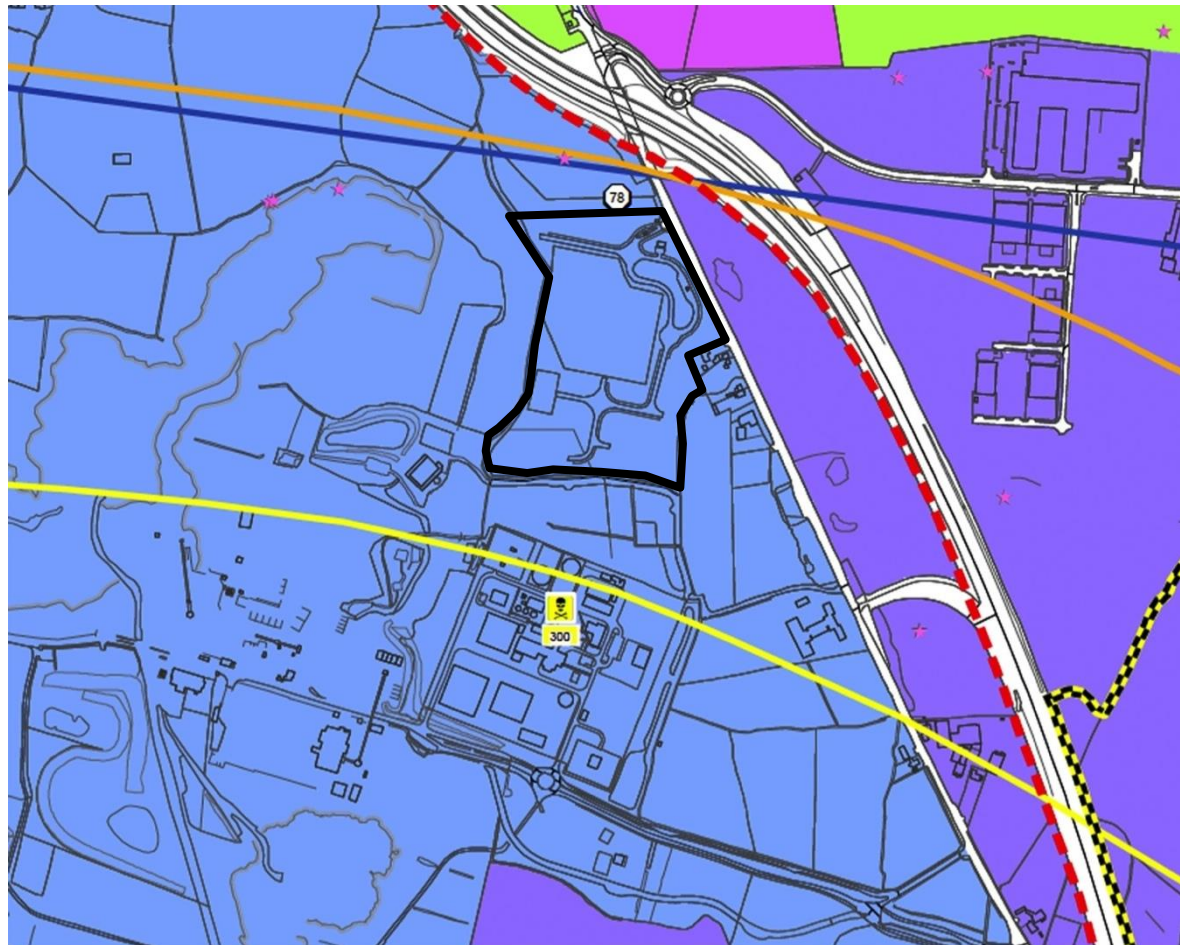
Land Use Zoning Objective

The proposed RBSF is on lands zoned 'HI' – Heavy Industry, the objective of which is: - "Provide for heavy industry." The extent and scale of the zoned areas is shown in Figure 39. Under 'HI' zoning, the FCDP states:

"Facilitate opportunities for industrial uses, activities and processes which may give rise to land use conflict if located within other zonings. Such uses, activities and processes would be likely to produce adverse impacts, for example by way of noise, dust or visual impacts. HI areas provide suitable and accessible locations specifically for heavy industry and shall be reserved solely for such uses." (pg. 366)

'A Waste Disposal and Recovery Facility (High Impact)' is a permissible use within this zoning designation as illustrated in Table 24. From a land-use perspective, the development of the proposed RBSF, considering the likely activities arising would be compatible.

Figure 39: Land Use Zoning Map, RBSF site outlined approximately in black, Source Fingal County Development Plan, Map 12



Land Use Zoning Matrix for the Subject Site

The purpose of zoning is to indicate the land use objectives for all the lands within the Fingal County. The following table (Table 24) sets out the types of development that are considered compatible with the associated land-use zoning (Permitted in Principle) and uses which are considered incompatible with the associated land use zoning (Not Permitted).

Table 24: Land use 'HI' Zoning Matrix under the Fingal County Development Plan 2017 – 2023, pg. 366 (SLA emphasis added)

Category	Zoning Objective – Z7
Permitted in Principle	Abattoir, Concrete/Asphalt, Extractive Industry/Quarrying, Fuel Depot/Fuel Storage, Heavy Vehicle Park, Industry - High Impact, Office Ancillary to Permitted Use, Open Space, Plant Storage, Restaurant/Café, Retail - Local < 150 sqm nfa, Sustainable Energy Installation, Telecommunications Structures, Utility Installations, Waste Disposal and Recovery Facility (High Impact) .
Not Permitted	Aerodrome/Airfield, Agricultural Buildings, Agricultural Farm Supplies, Agricultural Machinery Sales and/or Maintenance, Agri-Tourism, Air Transport Infrastructure, Amusement Arcade, Bed and Breakfast, Betting Office, Boarding Kennels, Builders Provider/Yard, Burial Grounds, Car Hire Holding Area, Caravan Park – Holiday, Caravan Park – Residential, Cargo Yards, Carpark - Non-Ancillary, Casual Trading, Childcare Facilities, Civic Waste Facility, Community Facility, Conference Centre, Cultural Facility, Dancehall/Nightclub, Education, Enterprise Centre, Exhibition Centre, Fast Food Outlet/Take-Away, Farm Shop, Food, Drink and Flower Preparation/Processing, Funeral Home/Mortuary, Garden Centre, General Aviation, Golf Course, Guest House, Health Centre, Health Practitioner, High Technology Manufacturing, Holiday Home/Apartments, Home-Based Economic Activity, Hospital, Hotel, Industry – General, Industry – Light, Logistics, Office ≤100sqm, Office >100sqm and <1,000sqm, Office ≥1,000sqm, Park and Ride Facilities, Petrol Station, Place of Worship, Public House, Public Transport Station, Recreational, Facility/Sports Club, Residential, Residential Care Home/Retirement Home, Residential Institution, Retail - Convenience ≤ 500 sqm nfa, Retail - Comparison ≤ 500 sqm nfa, Retail - Comparison >500sqm nfa, Retail - Supermarket ≤ 2,500 sqm nfa, Retail - Superstore > 2,500 sqm nfa, Retail - Hypermarket > 5,000 sqm nfa, Retail - Factory Outlet Centre, Retail Warehouse, Retail - Warehouse Club, Retirement Village, Sheltered Accommodation, Taxi Office, Traveller Community Accommodation, Vehicle Sales Outlet – Small Vehicles, Vehicle Sales Outlet – Large Vehicles, Veterinary Clinic, Warehousing, Wholesale.

(Note: Highlights added)

Irish Water undertook a site selection process, in order to identify a suitable site for the RBSF including public consultation. A copy of this report is located under Volume 2, Part B - Appendix 4D, 4E, 4F of the EIAR. In summary, the stages of this process are described as follows: -

Stage 1: Development of a site selection methodology and the identification of site selection considerations and criteria.

Stage 2: Identify suitable locations for the proposed facility applying the site selection considerations and criteria together with any other relevant factors for assessment. From this process, a shortlist of potentially suitable sites will emerge.

Stage 3: Shortlist of suitable will be subject to a detailed assessment to identify any impacts of the Proposed Development on the local community and wider area. The sites are evaluated and the most suitable site is identified.

In setting out a methodology for the identification of suitably zoned lands within the catchment of the Ringsend WwTP and the proposed GDD Project, it was considered that in terms of land use planning, the RBSF can be considered to be a 'waste storage facility'. The activity at the facility is a waste management operation involving the temporary storage of a waste product pending its final recovery to lands, resulting in benefit to agriculture or ecological improvement. No processing (including recovery) will take place at the RBSF.

A 'Biosolids Storage Facility' as a land use classification is not expressly defined within the FCDP. The land use definition which most closely aligns with the Proposed Development is a 'Waste Disposal and Recovery Facility (High Impact)'.

Under the Appendix 4, Technical Guidance Notes, of the FCDP Appendices, Waste Disposal/Recovery Facilities (High Impact) is described as:

The use of land or buildings for facilities with high potential for odour, noise, dust and other nuisances including putrescible waste. Examples of high impact facilities are transfer stations and treatment plants for organic waste and residual waste which have a potential for odour, crushing and processing of construction and demolition waste, and facilities where waste is stored outside of buildings and which is visually intrusive or otherwise likely to be a nuisance, including scrapyards. Excludes landfills.

In discussion with Fingal County Council as part of the site selection process for this EIAR, the Council have confirmed that their view is that the RBSF proposals fall in to the category of "Waste Disposal and Recovery Facility (High Impact)" and is therefore permitted in principle at this location. A copy of the site selection reports can be found at the following location: Volume 2, Part B - Appendix 4D, 4E, 4F of the EIAR

Fingal County Council considered that the proposed RBSF aligned with the land use definition for 'Waste Disposal and Recovery Facility (High Impact)' on the basis that the proposed RBSF development had potential for high impact arising from traffic generated, noise, odour, air quality and visual impact (of the proposed structures). Notwithstanding, while there is potential for impacts to arise, there are a number of robust mitigation measures included as part of the proposed RBSF to ensure the impacts are limited.

The details of these specific impacts and the proposed mitigation measures are discussed in detail under Volume 4 Section 4: Water, Volume 4 Section 8: Air & Climate, Volume 4 Section 9: Noise & Vibration, Volume 4 Section 10: Odour, Volume 4 Section 13: Traffic and Volume 4 Section 14: Landscape.

The Proposed Development at the RBSF development can be considered as 'Permitted In Principle' under the land use zoning objectives of the FCDP given the nature of the development. Furthermore, the site sits within an area that is industrial in nature, which includes an existing quarry and electricity power station (to the south).

Policy Support – Land Use Zoning

The Proposed Development at the RBSF is in accordance with the Land Use Zoning Objective and Matrix under the Fingal County Development Plan 2017 – 2023.

Local Objective

Appendix 2 of the FCDP refers to Local Objective 78, which states:

"Facilitate the development of infrastructure for waste management, including construction and demolition waste processing, biological treatment of organic waste, a sludge treatment facility and a waste transfer station."

The Proposed Development at the RBSF can be considered as a 'waste transfer facility' and represents the 'development of infrastructure for waste management'. A waste transfer facility has been permitted at the RBSF site in the past, as outlined in more detail under Planning History, Section 9.2 below.

This Local Objective is identified at the boundary of the proposed RBSF site. It is reasonable to conclude that the Objective relates to the proposed RBSF site. The Planning History of this site further supports that contention.

Policy Support – Local Objective

The proposed use on this site of a RBSF is consistent with the provisions of Local Objective 78 which provides for a range of uses on these lands, including the management of waste; in this case a waste by-product called biosolids.

Surrounding Land Use Zoning Objectives

The site of the Proposed RBSF Component is located in an area that has established heavy industry uses. The site identified for the Proposed RBSF Component is adjacent to the Roadstone quarry to the east and the Huntstown Power Station to the south and is within a wider area identified for similar uses.

There is a residential property at the eastern boundary of the site. Two further residential properties, at approximately 25 metres from the site boundary, were demolished in March 2018. A development of six residential units on behalf of a charitable organization for homeless people is being progressed on the site of the demolished properties. These residential units are currently within the 'HI' land use zoning.

The lands located on the eastern side of the R135 are zoned 'GE' - General Employment, the objective of which is:

"Provide opportunities for general enterprise and employment."

Policy Support – Surrounding Land Use Zoning

The Proposed Development at the RBSF does not prejudice adjoining Land Use Zoning Objectives under the Fingal County Development Plan 2017 – 2023.

Aviation Policies and Objectives

The site lies just to the south of the Airport Safety Zone associated with the runway activities at Dublin Airport. Dublin Airport lies to the east of the RBSF lands. Two Airport Noise Zones are shown in the FCDP zoning maps; an Outer Zone within which the Council will continue to restrict inappropriate development and an Inner Zone within which new provisions for residential development and other noise sensitive uses will be actively resisted.

The objectives of the council are:

Objective DA10: of the Fingal County Council Development Plan 2017 – 2023 outlines the Council's intention to *"restrict development which would give rise to conflicts with aircraft movements on environmental or safety grounds on lands in the vicinity of the Airport and on the main flight paths serving the Airport, and in particular restrict residential development in areas likely to be affected by levels of noise inappropriate to residential use."*

Objective DA16: of the Fingal County Council Development Plan 2017 – 2023 seeks *"to continue to take account of the advice of the Irish Aviation Authority with regard to the effects of any development proposals on the safety of aircraft or the safe and efficient navigation thereof."*

The RBSF site falls within the Outer Airport Noise Zone (yellow line – Figure 38) and outside the Inner Airport Noise Zone (orange line – Figure 38)

In relation to Public Safety Zones the FCDP notes that Fingal County Council will continue to follow the advice of the Irish Aviation Authority (IAA) regarding the effects of Proposed Development on the safety of aircraft and the safe and efficient navigation thereof. This includes promotion of appropriate land use patterns in the vicinity of the flight paths serving the Airport. The northern edge of the RBSF site falls outside the Outer Public Safety Zone (blue line – Figure 38) by c. 100 m and is therefore also outside the Inner Public Safety Zone (purple line) as a result. We can conclude therefore that the RBSF site falls outside the flight path to the existing east-west runway at Dublin Airport.

Fingal County Council will continue to follow the advice of the Irish Aviation Authority and the Dublin Airport Authority regarding the effects of Proposed Development on the safety of aircraft and the safe and efficient navigation thereof. Irish Water wrote to the Irish Aviation Authority (IAA) and Dublin Airport Authority (DAA) as part of the scoping phase of the preparation of the EIAR. The DAA responded with some guidance on drainage, crane heights, sound insulation for buildings. The IAA raised no objection to the proposed RBSF in principle, subject to detailed requirements in relation to drainage, crane height sound insulation and the glint and glare study.

Policy Support – Aviation

The Proposed Development at the RBSF facility is considered to be in accordance with the aviation policies and objectives of the Fingal County Development Plan 2017 – 2023.

Seveso Directive Site

The Zoning Maps of the FCDP identify the location of 'Seveso' designated sites with a yellow symbol (see Figure 38) Directive 2012/18/EU (Seveso III) provides that appropriate consultation distances must be put in place so as to ensure that before decisions are taken, technical advice is available to Planning Authorities in respect of relevant establishments. The Health and Safety Authority provides such advice, where appropriate, in respect of planning applications within a certain distance of the perimeter of these sites.

The Seveso consultation distance applicable to the Huntstown Power Station is stated in the FCDP as being 300m from the perimeter of the site (See Figure 40).

The northern perimeter of the Huntstown Power Station is located approximately 100m from the southern boundary of the proposed RBSF site. The proposed RBSF structures, at their nearest point, are located approximately 300m away from the northern perimeter of the Huntstown Power Station. While the proposed site for the RBSF is within the Seveso consultation distance for the Huntstown Power Station the proposed structures themselves fall outside the 300m consultation distance.

The development permitted previously on these lands under ABP Ref. PL06F.EL.2045 included structures that were within this 300m consultation distance. Permission was granted for that development, notwithstanding this was within the consultation distance.

The Proposed Development at the RBSF are located outside of this consultation distance and as a result, there is no immediate issue arising regarding the proximity of this adjoining Seveso site. Irish Water wrote to the HSA during the Scoping exercise for this EIAR and has yet to receive a reply. In addition, the HSA is listed as a prescribed body by An ABP which Irish Water will engage with formally, during the SID application process.

Figure 40: Extract from Fingal County Development Plan Zoning, Table 12.13 – list of SEVESO Site, with the Huntstown Powerstation [Located to the south of the proposed RBSF site] with consultation distance from the perimeter of the power station site.

TABLE 12.13: LIST OF SEVESO SITES IN FINGAL

Establishment	Tier	Consultation Distance
Barclay Chemicals Manufacturing Ltd, T/A Barclay Corp Protection, Damastown Industrial Park, Mulhuddart, Dublin 15	Upper Tier	1,000m
Chemco (Ire) Ltd. T/A Macetown North, Damastown Industrial Estate, Mulhuddart, Dublin 15h	Upper Tier	700m
Contract & General Warehousing Ltd. Westpoint Business Park, Navan Rd. Mulhuddart	Upper Tier	700m
Mallinckrodt Medical Imaging-Ireland T/A Convidien Damastown, Mulhuddart	Upper Tier	1,000m
Astellas Ireland Co., Ltd., Damastown, Mulhuddart	Lower Tier	1,000m
Clarochem Ireland Ltd., (formally Helsinn), Damastown, Mulhuddart	Lower Tier	1,000m
Gensys Power Ltd., T/A Huntstown Power Station, Huntstown Quarry, Finglas, D11	Lower Tier	300m
Swords Laboratories, Watery Lane, Swords	Lower Tier	1,000

(Source HSA June 2016)

Policy Support – SEVESO

The proposed RBSF recognises the existing Seveso site and has been designed to ensure its buildings lie outside the consultation zone.

Development Management Standards

Under the FCDP 2017 – 2023, there are no specific development management standards attributed to 'A Waste Disposal and Recovery Facility (High Impact)'.

However, a number of Development Plan objectives are worth referring to

Objective EN05

Encourage proposals that are low carbon, well adapted to the impacts of Climate Change and which include energy saving measures and which maximise energy efficiency through siting, layout and design.

Objective EN09

Require details of the requirements for alternative renewable energy systems, for buildings greater than 1000sq m or residential schemes above 30 units, under SI 243 of 2012 European Communities (Energy Performance of Buildings) to be submitted at pre planning stage for consideration. These should take the form of an Energy Statement or Feasibility Study carried out by qualified and accredited experts.

The buildings in question have been carefully located on the site having regard to their orientation, aspect and visibility from the public road. The proposals include for the provision of Photovoltaic (PV) technology on the roof of one of the buildings to contribute clean renewable energy to the power requirement at the RBSF facility.

A feasibility study into the solar contribution potential was carried out by specialists as part of the initial design phase. This study will be re-examined at detailed design stage in order to capture rapid advances in solar technology, thus increasing efficiencies in the power output available from a single panel.

It has been demonstrated that this will generate substantial portion of the energy requirements for the 'RBSF facility' Further details on this can be found in Section 3.8 of the Engineering Design Report accompanying this application.

10 PLANNING HISTORY

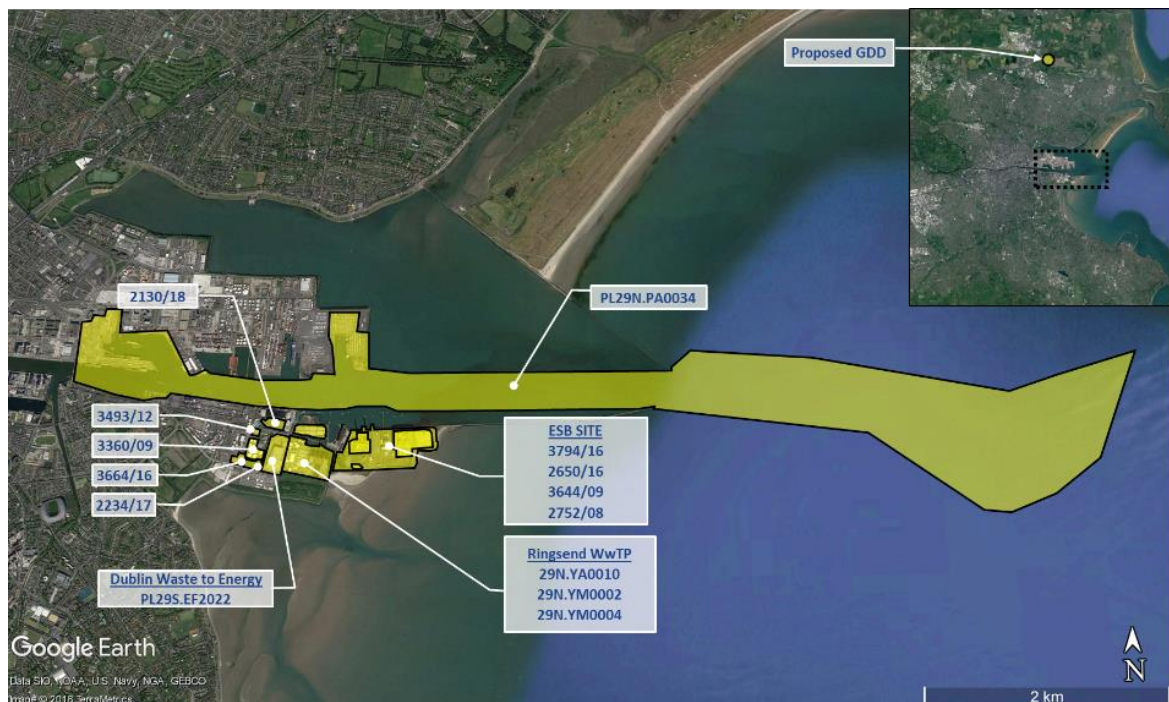
The following sets out the most relevant planning history pertaining to the sites upon which development is now proposed.

The history of each of the Ringsend WwTP site and RBSF site is set out at Section 2 of Volume's 2 and 3 of the accompanying EIAR. There have been a number of approvals for development and upgrading of the Ringsend WWTP over the period of its operation. The most relevant one to this particular application is the 2012 Approval. For the RBSF site, it includes 1 no. permission. The details of both sites are outlined below.

10.1 Ringsend WwTP

The applications most relevant to the Ringsend WwTP proposal are shown in Figure 41.

Figure 41: Ringsend WwTP Planning History Map



10.1.1 Ringsend Wastewater Treatment Works Extension

An Bord Pleanála Reg. Ref. No. 29N.YA0010

Date of lodgement: April 2012

Date of Decision: Granted on the 16th November 2012, subject to 16 no. conditions.

Address: Ringsend Wastewater Treatment Plan, Pigeon House Road, Dublin 4

Description of Development: Ringsend Wastewater Treatment Works Extension Project which will expand the existing wastewater treatment works at Pigeon House Road, Ringsend, Dublin to its ultimate capacity within the confines of its current site and achieve the required discharge standards. The proposed extension includes the following elements of works:

- Additional secondary wastewater treatment capacity at the wastewater treatment works site (approximately 400,000 population equivalent) including associated solids handling and ancillary works.
- A 9 kilometre Long Sea Outfall (in tunnel), commencing at an onshore inlet shaft approximately 350 metres east of the wastewater treatment works and terminating in an underwater outlet riser/diffuser in Dublin Bay.
- Road network improvements in the vicinity of the site (during the construction phase).

To address the overloading and '*nutrient-sensitive*' designation issues that had been identified, studies for an expansion of the Ringsend WwTP were commenced by Dublin City Council (Hereinafter: DCC) in 2008. In addition to examining the options for expanding and retrofitting the current plant for full nutrient removal at the existing site, DCC's consultants examined a further option permitted under the UWWTD.

This option involved relocating the treated effluent outfall to a point outside the area subject to the '*sensitive area*' designation, together with an expansion in 'secondary' treatment capacity only (carbonaceous BOD removal only) at the works. This is described as the Secondary Treatment/Long Sea Outfall Tunnel (LSOT) Option.

Commencement of 2012 Approval

Certain works under the 2012 Approval are currently being implemented by Irish Water, which are common to the 2012 Approval and the Proposed Upgrade Project. A number of Surgical Works have been completed and others are under way/about to commence construction, including the design and construction of the 400,000 PE Expansion. Some land-based aspects of the LSOT were implemented by DCC as advanced works in 2013 in order to avail of EIS/NIS implementation windows (Condition 10) and to comply with Condition 13 of the 2012 Approval. These advanced works include:

- the installation by the ESB of LSOT power cables (for the LSOT Tunnel Boring Machine) across the Brent Geese Compensation Grassland,
- construction of a c. 120m long access road from the Pigeon House Road to the south-east corner of the existing WwTW; and
- the installation of services, pedestrian safety measures, and the strengthening and upgrading of the Pigeon House Road for a distance of c. 675m east of the entrance to the ESB Poolbeg P.S Site.

10.1.2 Amendments to 2012 Approval – Site Access

An Bord Pleanála Reg. Ref. No. 29N.YM0002

Date of lodgement: 19th April 2016

Date of Decision: Granted on the 24th June 2016

Address: Ringsend Wastewater Treatment Plant, Pigeon House Road, Dublin 4

Description of Development: Irish Water via S146B of the Planning and Development Act 2000, as amended applied for alterations to the construction access arrangements approved under the 2012 Approval. The described works are as follows:

- Proposed temporary construction access onto the Pigeon House Road c. 100m west of the main entrance into ESB Poolbeg Power Station;
- Proposed temporary removal of two small areas of landscaping bunds located on the WwTW property along its eastern perimeter;
- Proposed temporary 'Link Road' (c.80m long) connecting the existing internal WwTW roads along the southern and eastern boundaries of the site.

The determination of ABP indicated that the works were immaterial. As a result, the alternative temporary construction access arrangement off Pigeon House Road now forms part of the 2012 Approval.

10.1.3 Amendments to 2012 Approval – Alternative/Additional Compounds

An Bord Pleanála Reg. Ref. No. 29N.YM0004

Date of lodgement: 21st July 2017

Date of Decision: Granted on the 12th January 2018

Address: Ringsend Wastewater Treatment Plan, Pigeon House Road, Dublin 4

Description of Development: Irish Water via Section 146B of the Planning and Development Act 2000, as amended applied for alterations to the construction compounds permitted under the 2012 application. The changes comprise the omission of 3no. compounds and the proposal of 3no. new compounds positioned in proximity to the site for a period of 3 years from the date of the Order.

The need for that application arose from a number of compound sites in third party control no longer being available and others, also in third party control, becoming available in the intervening period.

Prior to determining this Section 146B application, ABP considered it necessary to undertake a period of public consultation. During this period members of the public were afforded the opportunity to submit observations following the Board's request in accordance with Section 146B of the Planning & Development Act 2000, as amended. A number of observations were submitted.

The application was submitted in July 2017 and ABP granted approval on the 12th January 2018 following the period of consultation noted above.

This use of these compounds commenced in Q1 2018.

10.1.4 Amendments to 2012 Approval – Wording of Condition No. 1

A concurrent application is being made by Irish Water under the provisions of Section 146B is lodged with the subject application. The amendment relates to wording of Condition 1 of the 2012 Approval. The requested change to condition is as follows:

Condition 1: "The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and the information contained in the environmental impact statement, including all mitigation measures contained therein, as amended by the further plans and particulars submitted at the oral hearing, except as may otherwise be required in order to comply with the following conditions, and except as modified by any other consent granted in respect of the permitted development.

(Proposed change in text underlined by SLA for clarity)

The purpose of the amendment is to clarify the relationship between the approval and future consents under the Planning and Development Act, 2000 (as amended) and to ensure that there is clarity as to the conditions that apply to future consented development on the site.

10.1.5 Development In The Surrounding Area

There are a number of development projects envisaged or recently developed in reasonable proximity to the planned development that have been taken into account in the application now being made.

Dublin Waste to Energy / Covanta

An Bord Pleanála Reg. Ref. No. PL29S.EF2022

Date of lodgement: 30th June 2006

Date of Decision: Granted on the 19th November 2007, subject to 13 no. Conditions

Address: Pigeon House Road, Dublin 4

Description of Development: A waste to energy facility with access onto the Pigeon House Road, Poolbeg Peninsula.

It was subsequently granted a waste licence by the Environmental Protection Agency in December 2008, and received authorisations from the Commission for Energy Regulation in September 2009.

The construction of this waste to energy plant has recently been completed, and it is now operational.

This facility is located immediately west of the existing Ringsend WWTP.

Alexandra Basin Redevelopment

An Bord Pleanála Reg. Ref. No. PL29N.PA0034

Date of lodgement: 6th March 2014

Date of Decision: Granted on the 8th July 2015, subject to 13 no. Conditions

Address: Alexandra Basin and Berths 52 and 53 together with associated works in Dublin Port, Alexandra Road, Dublin 1.

Description of Development: The redevelopment of Alexandra Basin and Berths 52 and 53 together with associated works in Dublin Port and the Dredging of the Liffey approach Channel and is broken into 3 no. parts:

Alexandra Basin: The infilling of graving Dock No 2 having an area of 6,055 m² The excavation and restoration of historic Graving Dock No.1 The removal of infill material having an area of 9,000 m²; The relocation of the ore concentrates loading system within Alexandra Basin West The relocation of double deck ramp No. 4 to new river berth at Berth Nos. 52/53 The demolition of: The bulk jetty having an area of 3,200 m²; A section of North Wall Quay extension having an area of 21,700 m²; Five no. control rooms/buildings/oil bund having a total area of 1,715 m²; A floating ramp on the Liffeside of North Wall Quay Extension; A lead-in jetty at Graving Dock No. 2 within the Basin. The construction of: New quay walls at North Wall Quay Extension 937 m total in length including a rounded eastern end using salvaged stone material from demolished sections of quay; Moving and Reconstruction of existing light house to eastern end of revised North Wall Quay extension; Extension of Alexandra Quay West of 130 m in length; Rebuilding of existing quay walls in the remainder of Alexandra Basin West having an aggregate length of 1200 m; New 273 m long Ro-Ro jetty and provision of three Ro-Ro ramps; Interpretive glazed pavilions having an area of 36 m² on the west of the reconfigured North Wall Quay Extension and the presentation of a salvaged historic concrete block from the demolished section of quay. The dredging of: 470,000 [t] of contaminated material to a depth of -10.0 m Chart Datum (CD) over an area of 194,000 [m²] within the redeveloped Alexandra Basin and its remediation; Conservation works to the existing pump house and to retained sections of North Wall Quay Extension.

Berth 52 and 53: The demolition of existing berths 52 and 53; Jetty at Berth 52 having an area of 500 m²; Concrete Dolphin at Berth 53 having an area of 500 m² The construction of: A new river berth at Berths 52/53 300 m long; new 75 m mooring jetty at new river berth; new 40 m long mooring jetty to extend existing berth 49, 50 m long; The infilling of the Terminal 5 Ro-Ro basin, an area of 45, 650 m² Raising of existing levels by 1.4 m over an area of 95,000 m² Dredging of new river berth to -10.0 m CD

Liffey Channel: Construction of a marina protection structure to a height of +7.0m CD and a length of 220m on the S side of the River channel. Dredging of the shipping channel to a depth of -10m CD from a point 55m to the East, of the East link bridge to a location in the vicinity of Dublin Bay a total distance of 10,320m.

This approval is now being implemented by the Dublin Port Company.

National Oil Reserves Agency

Dublin City Council Reg. Ref. No. 2656/16

Date of lodgement: 13th April 2016

Date of Decision: Granted on the 3rd February 2017

Address: Poolbeg Tank Farm, Pigeon House Road, Ringsend, Dublin 4

Description of Development: A new single storey operational room adjacent to the existing terminal entrance /exit gate onto Shelly Banks Road, a new transformer, a new pump-pad, truck loading gantry, new fire protection system and associated works which will result in the site being upgraded to Upper Tier under the Seveso regulations.

Greater Dublin Drainage

An Bord Pleanála Reg. Ref. No. PL06F.PC0152

Date of lodgement: Ongoing

Date of Decision: Unknown

Description of Development: The Greater Dublin Strategic Drainage Study (GSDSDS) took a high-level view of the wastewater drainage and treatment requirements of the Greater Dublin Area (GDA) as a whole. The Final Strategy Report and subsequent Strategic Environmental Assessment (SEA) were prepared in 2005 and 2008 respectively on behalf of the seven local authorities that form the GDA, to guide the future provision of waste water infrastructure in the area.

The Irish Water Project Team completed site selection in 2013 and identified the best solution for the future development of wastewater treatment in the wider Dublin region as being:

- An underground orbital sewer and two pumping stations;
- A wastewater treatment plant (WwTP) on a 23-hectare site at Clonshagh (Clonshaugh);
- An outfall pipe from the wastewater treatment discharging 1 km north-east of Ireland's Eye (6km out to sea)

10.2 Regional Biosolids Storage Facility Site

The application most relevant to this RBSF proposal is identified below, as it is a current permission on these lands.

Figure 42: The Regional Biosolids Storage Adjoining Planning History



The Regional Biosolids Storage Facility at Newtown, Dublin 11 will also form part of that planning application and Environment Impact Assessment Report (EIAR).

Following the site selection process, Irish Water are currently completing studies required for the preparation of an Environment Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) for the selected site. These will be submitted as part of an application for planning permission to ABP in Q2 2018.

This is an Irish Water project that has the potential to interact with the overall Ringsend WwTP Upgrade Project.

Further detailed examination of planning history on site and surrounding area are outlined in the accompanying EIAR under (Volume 3, Section 2).

10.2.1 Current Approval – Kilshane Cross Recycling Park

An Bord Pleanála Reg. Ref. PL06F.EL.2045

Date of lodgement: Granted on the 29th of September 2005

Date of Decision: April 2006

Address: A site in the townland of Newtown, Kilshane Cross, Dublin 15.

Description of Development: Fingal County Council sought permission under Section 175 of the Planning & Development Act 2000, as amended for development comprising: -

- A Construction and Demolition Waste Recovery Facility processing 75,000 tonnes per annum (tpa);
- A Biological Waste Treatment Facility treating 45,000 tpa of segregated domestic and commercial organic waste;
- A Waste Transfer Facility processing 65,000 tpa of municipal solid waste; and
- A Sludge Hub Centre treating 26,511 tpa of municipal sludge.

The ABP Inspector noted in relation to the proposal, *inter alia*, that: -

"It is considered that, subject to compliance with the Conditions set out in the Schedule..., and to the proposed Recycling Park being constructed and operated in accordance with a Waste Licence from the Environmental Protection Agency, the proposed development: -

- *would not have an unacceptable impact on the amenities of residential properties in the vicinity,*
- *would not seriously injure the visual amenities of the area,*
- *would not interfere to any significant extent with existing land uses in the vicinity,*
- *would not be likely to result in significant adverse effects on the environment,*
- *would not have a significant effect on the archaeological heritage of the area,*
- *would be acceptable in terms of traffic safety and convenience,*
- *would not be contrary to the proper planning and sustainable development of the area."*

Approval was granted by An Bord Pleanála in April 2006. Certain enabling works, including drainage works, internal access roads, boundary fencing, and electricity and telecommunications infrastructure have been carried out at the proposed RBSF site on the basis of that approval. Fingal County Council has constructed internal roads and services within the site. An approval made pursuant to Section 175 of the Planning and Development Act 2000, as amended is of indefinite duration.

Unlike a 'normal' Permission under Section 34, a permission made pursuant to Section 175 of the Planning & Development Act 2000, as amended does not wither.

10.2.2 FCC Reg. Ref. F08A/0624

Date of lodgement: June 2008

Date of Decision: Granted on the 6th of August 2008

Address: The Townland of Newtown, In The Barony of Coolock, and in the Townland of Kilshane, In the Barony of Castleknock, in the County of Dublin.

Description of Development Permission was sought by Electricity Supply Board (ESB) to divert a section of the existing Finglas-Ashbourne 38kv line. The diversion required the installation of 2 no. 38kv 12 Metre Line Termination Masts, under the existing Finglas-Ashbourne 38kv Line, and this will be located in the Townland of Newtown, Barony of Coolock. The diversion will also require the replacement of an Existing Single Wood Pole with a Double Wood Portal, under the existing

Finglas-Ashbourne 38kv Line and this will be located in the Townland of Kilshane, Barony of Castleknock.

10.2.3 Development in the Surrounding Area

There are a number of development projects envisaged in reasonable proximity to the planned development that have been taken in to account in the application now being made.

FCC Reg. Ref. FW13A/0089/E1

Date of lodgement: 1 December 2017

Date of Decision: Granted on the 19 January 2018 for a further 5 years

Address: Huntstown Quarry, North Road, Finglas, Dublin 11

Description of Development: the construction of a Renewable Bioenergy Plant to generate up to 3.8MW of electricity from 90,000 tonnes of non-hazardous biodegradable waste per annum utilising Anaerobic Digestion (AD) technology.

The proposed plant will comprise the following elements:

- (i) 13.9m high main building (4958.5 sq. m. floor area) incorporating feedstock reception and processing areas, digestate treatment areas, storage areas, workshop and including a 3 storey administration and welfare area (1744.8 sq. m. floor area);
- (ii) Digestion Tank Farm (4m high bund) enclosing 4 no. digester tanks (up to 25.4m max. height, c.5000m³), 2 no. digestate treatment tanks (up to 25.4m max. height, c.5000m³), 2 no. digester feed buffer tanks (up to 17.6m max. height, 1800m³), and 2 no. pre-pasteurisation tanks (up to 12.8m max. height, 700m³) [total 10 no. tanks], to include stairwell towers and gantries;
- (iii) Wastewater Treatment Plant Tank Farm (4m high bund) enclosing 3 no. SBR Aeration tanks (up to 16.0m max. height, c.2200m³), sludge tank (up to 10.8m max. height, c.75m³), process water tank (up to 22.9m max. height, 2000m³) and process liquor tank (up to 22.6m. max. height, 2400m³) [total 6 no. tanks], to include stairwell towers and gantries;
- (iv) 2 no. enclosed Combined Heat and Power 2MW engines (3.6m high: 65.8 sq. metres floor area each), 28m high stack, 13.7m high gas holder (1800m³), 8.2m high biogas flare stack, 2 no. 12m high gas scrubbers, gas treatment equipment enclosed in 1.8m high container (30.6 sq. m floor area) and 2.5m high container (78.8 sq. m floor area), 3 no. banded electrical transformers (4.8m high) and 3.0m high sub-station (51.9 sq. m. floor area);
- (v) Various plant and vessels including 2 no. pasteurisation units (5.85m high) each containing heat exchanger and 3 no. c.24m³ tanks, 2.5m high ferric chloride storage tank (c.15m³), 5m high caustic storage tank (c.35m³), storm water tank (up to 21m max. height, c.2000m³), 4 no. liquid waste tanks (up to 10.5m max. height, c.90m³), enclosed pump equipment (2m high, 10 sq. m floor area), boiler, and enclosed air blower unit (3m high, 36 sq. m floor area);
- (vi) Odour Control System (15.7m high: 313.8 sq. m. floor area) and 25m high stack;
- (vii) Approx. 100mm diameter 1000m long rising main with connection into existing mains sewer at North Road, and package pumping station (2m high: 29.7 sq. m. floor area)
- (viii) 2 no. weighbridges, office (17.2 sq. m. floor area), banded vehicle refuelling area with diesel storage tank (c.5000 litres), 2 no. wheel washes and vehicle wash, inner and outer 2.4m high mesh panel perimeter fencing with 7m wide entrance gate and 5.5m wide exit gate, 5 no. directional signs (total area of 8.8 sq. m), pipebridge and walkway, lighting, landscaping, 22 no. car parking spaces and bicycle rack, internal circulation roads, concrete foundation slabs and all site works, facilities and services. Access is at an existing permitted vehicular access at North Road and vehicles will avail of existing quarry circulation roads.

FCC Reg. Ref. F18A/0146**Date of lodgement:** 22 March 2018**Date of Decision:** 16 May 2018**Address:** Newtown, Kilshane Cross, Co Dublin

Description of Development: A storage and distribution centre for new imported vehicles with a total capacity for 5,951 no. vehicles and comprises vehicle storage, internal circulation roadways, vehicle loading and unloading area and transporter parking spaces. The surface treatment of the vehicle storage areas comprises recycled plastic modular porous paving. Associated facilities include: a vehicle wash area, fuelling area and valet enclosure (approx. 120 sq.m.). The development also includes a vehicle inspection and fit out building (approx. 2656 sq.m. and 9.14m high) incorporating operation control room, offices, meeting room, canteen, toilets, plant area and building signage. Other site development works include: 1 no. security hut (11 sq.m); staff car parking (28 no. spaces) and staff bicycle parking spaces (14 no. spaces); boundary treatments including landscape berm and boundary fence over wall (approx. 3.33m high) new primary gated vehicular entrance onto the R135; emergency gated vehicular entrance onto Kilshane Road (L3125); lighting and CCTV poles (approx. 12m high); on-site substation (24.6 sq.m); external plant area (76 sq.m.); underground drainage and electricity infrastructure; the removal of existing vegetation and new landscaping works. The development also includes road improvement works to the Kilshane Road (L3125) comprising the reconfiguration of the existing roadway (including extending existing culvert); provision of a left turn lane at the junction with the R135; and dedicated cycle and pedestrian facilities. All development to take place on a site of approx. 13.1 hectares.

FCC Reg. Ref. F16A/0128**Date of lodgement:** 30 March 2016**Date of Decision:** Final Grant 28 June 2016**Address:** Dublin Airport Logistics Park, St. Margaret's Road, St. Margaret's, Co. Dublin.

Description of Development: Permission was sought by Rohan Holdings Ltd. for development comprising four single storey units for industrial and/or warehouse use with ancillary two storey office with a gross floor area of 15,692 square metres. The development will also include two ESB sub-stations, ancillary site development works for underground duct work, drainage and utility services, service yards, car parking, signage to the proposed units, the extension of Birch Drive to the east and to the west linking back to Elm Road and a new separate access road off Elm Road, on a site of 3.52 hectares.

A Commencement Notice for this development been submitted to the Building Control Management System (BCMS) on 19 December 2017 with works due to commence on 15 January 2018.

FCC Reg. Ref. FW17A/0012**Date of lodgement:** April 2017**Date of Decision:** Granted on the 8 May 2017**Address:** Kilshane, Huntstown & Johnstown Townlands, North Road, Finglas, Dublin 11

Description of Development Permission was sought by Roadstone Ltd. for development comprising an increase in the permitted intake rate of construction and demolition (C&D) waste at the facility from a maximum of 24,950 tonnes per annum at present to 95,000 tonnes per annum in future years. The application provides for continuation and intensification of waste recovery activity at the established C&D waste recovery facility (Planning Ref. F02A/0602) on a 1.9 hectare site within the Central Quarry, in the immediate near-term (up to 2-3 years). It also provides for relocation of C&D waste recovery activities to a new waste recovery facility on a 5.2 hectare site in north-eastern corner of the Huntstown Quarry Complex and construction of a hardstanding area, waste processing shed, surface water processing shed, surface water management infrastructure and internal access roads at the new recovery facility. The proposed development requires a review of the existing waste licence (Ref.W0277-01) by the Environmental Protection Agency.

A Commencement Notice for this development has not yet been submitted, based upon a search of the Building Control Management System (BCMS).

FCC Reg. Ref. FW14A/0162**Date of lodgement:** February 2015**Date of Decision:** Granted on the 24 April 2015**Address:** Ravenswood, and two semi-detached residences to the south, at Kilshane, Newtown, North Road (R135), Finglas, Dublin 11**Description of Development:** Permission was sought by the Peter McVerry Trust for development comprising the demolition of existing 2 no. 2 storey semi-detached dwellings with single storey extensions to rear (109 sqm) and construction of 6no. 1 bedroom, single storey houses and single storey community building, containing a sitting room, meeting room and offices in two blocks and all associated site works.

The development in this case adjoins the RBSF site.

It was proposed that the surface and foul water drainage from the proposed residential development could be connected with the drainage infrastructure of the proposed site once it became operational. Condition 13 of the Grant of Permission states:

" i) Prior to commencement of development the applicant shall submit for the written agreement of the Planning Authority details of the applicable wayleave and other relevant legal agreements with regards to the proposed connections to the existing network on the adjacent premises.

ii) No surface water / rainwater shall discharge into the foul sewer system under any circumstances."

Based on details available on the BCMS, the development commenced on site in February 2018.

The site of the Proposed Development under Reg. Ref. FW14A/0162 was designated under Local Objective 418 of the Statutory Development Plan at the time of the permission, which seeks to: -

"Provide for additional units to accommodate homeless persons."

This Local Objective formed part of the previous Fingal County Development Plan (2011 – 2017), but is not identified in the current County Development Plan 2016-2022 outlined under Section 8.3.1 of this Report.

This permission was granted at a time when the Permission for Fingal County Council's Waste Facility had already been approved under ABP Ref. PL06F.EL.2045. Notwithstanding this, we confirm that provision has been made in the drainage proposals for the RBSF to accommodate the permitted development by Peter McVerry Trust at the adjoining property should that need arise.

Further detailed examination of planning history on site and surrounding area are outlined in the accompanying EIAR (Volume 4, Section 2).

11 COMMUNITY GAIN

With respect to community gain for the Proposed Upgrade Project, Irish Water is of the considered opinion that the nature of the development (i.e. the provision of wastewater infrastructure) is in itself a significant community gain to both the local area and wider regional area.

The Proposed Upgrade Project will bring significant lasting benefits to the environment, and underpin the continued population and economic growth targets for the Dublin Region. The Proposed Upgrade Project is a regionally significant outcome for the needs of the Capital and therefore, National growth.

Notwithstanding the above, Irish Water identifies an opportunity to provide benefits to the local communities which are proximate to the Proposed Development sites in addition to the inherent environmental, economic and public health benefits.

At the RBSF site, Irish Water as part of the application intends to provide improvements to the R135 along the frontage to the RBSF site. These improvements comprise a footpath and verge for public benefit beyond the site as part movement along the R135 and to the entrance to the RBSF. Details of the extent of this enhancement of access infrastructure are illustrated under drawing no. Y17702-PL-004, titled 'Proposed Site Layout' and Y17702-PL-011, titled 'Landscape Layout'.

In delivering national water infrastructure, Irish Water recognises that social procurement can play a role in furthering strategic social and economic development objectives and delivering tangible benefits for communities where major developments are planned.

Accordingly, Irish Water is proposing a social procurement initiative for the 'Proposed Ringsend SBR Retrofit Contract and the Regional Biosolids Storage Facility Construction Contract (RBSF)' as they meet the criteria of delivering employment/enterprise, and environmental benefits to communities in proximity to the Proposed Developments.

Irish Water will include social clauses as a performance condition of the contracts above in order to leverage employment opportunities for local communities in proximity to the Proposed Development.

Irish Water will require, through the use of social clauses in the contract that a minimum of 10% of the person weeks worked on the project during construction are delivered by new entrant employees/job seekers.

Employment opportunities will be targeted to new entrant employees/job seekers, which are defined as:

- a person that preferably is leaving or has within the last 36 months left an educational establishment or a training provider (including paid student work placements); or
- a person that has not worked in the construction sector [for more than 52 weeks] and is seeking employment that includes on-site training and assessment, or offsite training (or a mix of these); or
- a person that has been registered as a job-seeker for more than 52 weeks and is seeking employment that includes on-site training and support to become fully productive or an existing 'new entrant trainee' known to the Contractor that is seeking a new position to complete their 'new entrant' period (with verifiable documentary evidence to be provided) or another person accepted as a new entrant trainee; or
- an apprentice who is registered with a recognised apprenticeship provider or a graduate or professional trainee (including current student) that is registered with an appropriate education or professional body or a graduate programme.

The appointed contractor(s) will be required to submit a community benefits plan which sets out the actions that will be undertaken to ensure the achievement of the minimum social employment requirements of the contract. This action plan will form part of the contract award process and the achievement of the community benefits requirements will be a condition relating to the delivery of the contract.

As a contract condition, the contractor(s) will be required to notify Irish Water and the local employment services (INTREO offices at Blanchardstown and Dublin City in relation to the works) and training service organisations (CDETB) of all upcoming relevant vacancies a minimum of six

weeks in advance on a rolling basis over the construction period and will be required to work closely with the local employment services and Irish Water in order to fill the available positions.

'Meet the Buyer' events will be also organised locally so that potential sub-contractors and suppliers in the project area can meet with the appointed Contractor(s).

Additionally, a minimum of 5% of the overall project team personnel including contractor(s) staff, consultants and sub-consultants are to be employees of small enterprises, being companies that employ fewer than 50 persons and which have an annual turnover not exceeding €25,000,000 and/or an annual balance sheet total not exceeding €25,000,000.

Irish Water intends to deliver infrastructure proximate to the RBSF site and incorporate social clauses within the contracts. These aspects of social inclusion form part of the wider delivery of crucial infrastructure. It remains the opinion of Irish Water that the delivery of the 'Proposed Upgrade Project' represents a significant planning gain for the local and regional community at large, through its delivery of efficient and effective wastewater infrastructure that will assist in delivering the targeted growth for the region.

For all of the reasons, arguments and considerations noted above, we respectfully request that ABP does not attach a Condition relating to community gain, as the Proposed Upgrade Project itself amounts to a significant community gain.

12 FLOOD RISK

As part of this application, a separate Flood Risk Assessment has been prepared for The Proposed Development at both the Ringsend WwTP and the RBSF site at Newtown, Dublin 1. Both reports accompany this planning application.

In summary, there is no flood risk identified with either component of this Proposed Development.

13 NATURA IMPACT STATEMENT

An Appropriate Assessment Screening Report (Stage 1) and a Natura Impact Statement (Stage 2) accompanies this planning application.

On the basis of the findings of the enclosed Natura Impact Statement, it was concluded that the Proposed Development to deliver the Proposed Upgrade Project at Ringsend WwTP and the RBSF, on their own or in combination with other plans and projects, will not adversely affect the integrity of any European site.

14 ENVIRONMENTAL IMPACT ASSESSMENT REPORT

As detailed at Section 3 of this Report, an EIAR accompanies this planning application. The EIAR does not consider that there are any significant adverse environmental effects arising from the Proposed Development to deliver the Proposed Upgrade Project at either the Ringsend WwTP or the RBSF sites.

15 CONCLUSION

This SID Planning Application Report sets out the Proposed S37E application submitted to ABP, the Proposed Development of the Ringsend WwTP and the overarching planning and development policies and objectives which govern the delivery of wastewater infrastructure.

The purpose of this SID Planning Application Report is to identify to ABP the range of accompanying plans & particulars, pre-planning engagement, the existing site context, relevant planning history, along with the policies and objectives for infrastructure of this nature for ease of reference in their assessment of the Proposed Development. The layout of this report provides a clear picture of all the relevant information for the proper consideration of the application, as well as enabling a more informed judgement on the proposal brought forward by Irish Water.

Since 2005, the requirement for additional wastewater treatment capacity to serve the Greater Dublin Region has been set out. In terms of Ringsend WwTP, its capacity of 2.4 million population equivalent within the confines of its current site is a drainage requirement for the Dublin Region in order for local authorities to deliver the Targets of the Regional Planning Guidelines for the GDA and subsequently the National Planning Framework.

The Proposed Development comprises revisions and alterations to the 2012 Approval (additional capacity upgrade, a 9 kilometre Long Sea Outfall and associated works). The proposed revisions and alterations will continue to facilitate the expansion of the existing wastewater treatment works to its capacity of 2.4 million population equivalent within the confines of its current site, as permitted under Reg. Ref 29N.YA0010. However, this will now be achieved primarily through the introduction of aerobic granular sludge (AGS) technology throughout the plant.

The use of the AGS technology means there is no longer a need to relocate the existing outfall to comply with the parameters of the UWWTD. As a result, the LSOT is no longer required. Volume 2, Section 4 (Alternatives) of the EIAR sets out the environmental benefits arising from this revision, namely, limited excavation works and compactness of the treatment system, the reduced number of truck movements and mass of rock and spoil to be removed during construction and subsequently significantly reduced greenhouse gas emissions, compared to the permitted LSOT option.

The use of this AGS technology (with associated nitrogen and phosphorous removal) means there is no longer a need to relocate the existing outfall to comply with the parameters of the UWWTD. As a result, the LSOT is no longer required.

As set out under this report, the Regional Biosolids Facility forms part of the integrated wastewater treatment infrastructure for the Dublin Region. The RBSF is included in this planning application and will also be included in the planning application for the proposed GDD Project. The purpose of the RBSF is to store treated biosolids that will be produced at the Ringsend WwTP and the proposed WwTP for North County Dublin (the Greater Dublin Drainage (GDD) Project), prior to the transfer to suitable agricultural landbanks where the land spreading occurs.

Meeting the standards in the UWWTD is a key compliance issue for Ireland in protecting our environment from the adverse effects of waste water discharges. These compliance objectives are based on assumption that a positive decision is obtained from ABP within a 12 month timeframe from date of submission. The Proposed Development as part of the Proposed Upgrade Project has been developed to achieve these key compliance targets, as set out under Volume 3, Section 8: Water. Failure to achieve approval for the Proposed Development puts the applicant and Ireland at risk of substantial fines from the Court of Justice of the European Union.

From a planning perspective, the Proposed Development and thus its contribution to the delivery of the Proposed Upgrade Project is in accordance with the governing policies and objective documents, namely: -

Ringsend WwTP

- The design provides for the technology and infrastructure required so that the level of treatment will be increased to a higher standard (specifically involving nutrient reduction) to comply with the UWWTD and to achieve the emission limit values as set out in Schedule A of the EPA discharge licence.
- The Proposed Upgrade Project is compliant with the Water Framework Directive

- The Proposed Development complies with the National Planning Framework – Ireland 2040.
- The Proposed Development aligns with the objectives set out in the National Development Plan 2018-2027.
- The Proposed Development complies with the Regional Planning Guidelines for the Greater Dublin Area, 2010 – 2022.
- The project remains consistent with the Greater Dublin Drainage Study (2005) where the need for this development has been clearly demonstrated.
- The specific Ringsend WwTP development is:
 - In accordance with the policies and objectives under the Dublin City Development Plan 2016 – 2022.
 - Does not prejudice the objectives of the Poolbeg West SDZ Planning Scheme 2018.
 - Consistent with Local Statutory Planning frameworks.
- The proposed forms part of the Irish Water’s Water Services Strategic Plan which ensures the safeguarding and continued investment in the delivery of water infrastructure at present and into the future.
- The Natura Impact Statement in to the Proposed Development concluded that the proposals to upgrade the treatment process at Ringsend WwTP and the development of a RBSF, on their own or in combination with other plans and projects, will not adversely affect the integrity of any European site.
- The EIAR for the Proposed Upgrade Project did not identify any likely significant environmental effects and as a result the proposals will not adversely impact upon the environment.
- The Proposed Development provides for an increase in capacity and upgrade to treatment at the existing Ringsend WwTP facility which will result in a higher standard final effluent discharge and an improvement in the quality of the local receiving waters. The improvement of water quality for bathing waters is in accordance with the requirements set out under the Water Framework Directive (2000/60/EC, as amended by Decision No. 2455/2001/EC and Directive 2008/32/EC) and in compliance with the UWWTD and to achieve the emission limit values as set out in Schedule A of the EPA discharge licence.

Regional Biosolids Storage Facility

- The Proposed Development complies with the National Planning Framework – Ireland 2040.
- The Proposed Development is consistent with the objectives of the National Wastewater Sludge Management Plan (2016 – 2041)
- The proposal for the Regional Biosolids Storage Facility is in accordance with the policies and objectives under the Fingal County Development Plan 2017 – 2023.
- The Natura Impact Statement in to the Proposed Development concluded that the proposals to upgrade the treatment process at Ringsend WwTP and the development of a Regional Biosolids Storage Facility, on their own or in combination with other plans and projects, will not adversely affect the integrity of any European site.
- The EIAR for the Proposed Upgrade Project, including the Regional Biosolids Storage Facility did not identify any likely significant environmental effects and as a result the proposals will not adversely impact upon the environment.

For all of the reasons, considerations and arguments set out above, and as evidenced in the plans and particulars forming part of this planning application, including the Natura Impact Statement and Environmental Impact Assessment Report, ABP are invited to grant permission for the Proposed Development so as to facilitate delivery of the Proposed Upgrade Project which is a nationally significant waste water infrastructure project.

16 ENCLOSURES

This application to An Bord Pleanála comprises the following material:

1. SID Application Cover letter.
2. SID Application Form, signed and dated.
3. 100,000 euro SID application fee has been paid by electronic transfer, a copy of the remittance sheet is enclosed with this application.
4. Newspaper Notice, as published in Irish Independent on the 6th June 2018 and the Herald on the 6th June 2018.
5. Site Notice, as erected, on a white background, at 6 no. locations on the 6th June 2018 at Ringsend Wastewater Treatment Facility and 2 no. locations on the 6th June 2018 at the Regional Biosolids Storage Facility site.
6. Letter of Consent from Landowners
 - 1no. from Dublin Port Company
 - 1no. from Dublin Waste to Energy Ltd
 - 4no. from Dublin City Council
 - 1no. from Fingal County Council
7. A Schedule of Prescribed Bodies provided by An Bord Pleanála
8. Copy of Letter to Prescribed Bodies, sent to:
 - The Minister for Housing, Planning, Community and Local Government
 - The Minister for Communications, Climate action and the Environment
 - The Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs (Development Applications Unit)
 - Department of Transport, Tourism and Sport
 - Environmental Protection Agency
 - Dublin City Council
 - Fingal County Council
 - South Dublin County Council
 - Dún Laoghaire-Rathdown County Council
 - Kildare County Council
 - Meath County Council
 - Wicklow County Council
 - National Transport Authority
 - The Eastern and Midlands Regional Assembly
 - An Chomhairle Ealaíon
 - Fáilte Ireland
 - The Heritage Council
 - Waterways Ireland
 - The Health and Safety Authority
 - The Health Service Executive
 - An Taisce – the National Trust for Ireland
 - Inland Fisheries Ireland
 - Transport Infrastructure Ireland

- Department of Agriculture, Food and the Marine
9. SID Planning Application Report, prepare by Stephen Little & Associates
 10. An Environmental Impact Assessment Report, comprising:
 - EIAR Volume 1, (Non-Technical Summary)
 - EIAR Volume 2, (Written Statement & Appendices),
 - EIAR Volume 3, (Written Statement & Appendices - Ringsend WwTP),
 - EIAR Volume 4, (Written Statement & Appendices - RBSF),
 - EIAR Volume 5 (Ringsend WwTP & RBSF A3 sized planning application drawings)
 11. Appropriate Assessment Screening and Natura Impact Statement, prepared by Natura, Environmental Consultants.
 12. Planning Application Drawings, (See Enclosed Schedule of Drawings), prepared by a consortium of J. B. Barry & Partners, T. J. O'Connor & Associates, and Royal HaskoningDHV with input from the following specialists:
 - Brady Shipman Martin Landscape Consultants.
 - Paul O'Toole, Architects
 13. Engineers Design Report – RBSF, prepared by a consortium of J. B. Barry & Partners, T. J. O'Connor & Associates, and Royal HaskoningDHV.
 14. Architectural Design Statement – RBSF, prepared by Paul O'Toole Architects.
 15. Greater Dublin Drainage Strategy: Overview & Future Strategic Needs, prepared by Irish Water.
 16. Flood Risk Assessment for Ringsend WwTP, prepared by J. B. Barry & Partners.
 17. Flood Risk Assessment for RBSF, prepared by J. B. Barry & Partners.

Further requisite number of hard copies and electronic copies of the application and EIAR and NIS have been furnished to Dublin City Council, Fingal County Council and to the Prescribed Bodies, as instructed by An Bord Pleanála.



TJ O'CONNOR
& ASSOCIATES
CONSULTING ENGINEERS

BARRY
& PARTNERS
consulting engineers

 **Royal
HaskoningDHV**
Enhancing Society Together