UISCE ÉIREANN : IRISH WATER

Greater Dublin **Drainage Project**

Planning Report

JACOBS® TOBIN Consulting Engineers

Planning Report

Prepared on behalf of Irish Water, to accompany a Strategic Infrastructure Development application for the proposed Greater Dublin Drainage (GDD) project within Dublin City Council and Co. Fingal.

Submitted to:
An Bord Pleanála

Under the provisions of Section 37E of the Planning and Development Act, 2000 (as amended)

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UISCE ÉIREANN : IRISH WATER

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1. PREAMBLE

This Report has been prepared by AOS Planning, on behalf of Irish Water, the applicant, to set the planning context for the development and implementation of the Greater Dublin Drainage Project (hereafter referred to as the proposed Project). This Planning Report identifies and considers the existing policy support for the proposed Project in the context of relevant national, regional and local planning strategy, plans and policy documents, and provides an assessment of the potential impact of the project in respect of relevant planning policies and objectives.

1.1 INTRODUCTION

The proposed Project aims to provide strategic, long-term sustainable wastewater drainage and treatment infrastructure that the Greater Dublin Area (GDA) requires for its continued social and economic development. The initiative involves the provision of new wastewater treatment works, a co-located sludge hub centre, pumping station, a new orbital drainage network in the northern part of the Greater Dublin Area, an Odour Control Unit (OCU), a marine outfall, and the proposed regional biosolids storage facility (at Newtown, Co. Fingal, which also forms part of the Ringsend planning application lodged with An Bord Pleanála (pre-application Strategic Infrastructure Development Ref. PC0203).

The proposed Project is necessary to meet the Urban Wastewater Directive (91/271/EEC), the Water Framework Directive (WFD) (91/271/EEC) requirements, and other relevant EU Directives and National Regulations related to water quality, by ensuring a higher quality wastewater discharge. It will also assist in ensuring the continued sustainable growth and development of communities and businesses within greater Dublin. In this regard, the proposed Project will thus:

- safeguard public health;
- improve and protect the environment; and
- facilitate employment, social progress & economic growth in the wider Dublin region.

As is highlighted within this report, significant national, regional and local policies and objectives support the proposed project, with specific provision and support also being provided within the Fingal County Development Plan 2017 – 2023.

Within the above context, the 2010 Regional Planning Guidelines for the Greater Dublin Area specifically refer to the need to implement the Greater Dublin (Regional) Drainage Project which will entail a regional wastewater treatment plant and co-located sludge hub centre, marine outfall and orbital drainage system - (see Sections 6.2 and 6.5 on pages 113 and 128 of the GDA RPGs respectively). Furthermore, the proposed Project is one of ten projects listed in the Regional Planning Guidelines as '*Critical Strategic Projects for Waste Water & Surface Water*' (Table 11, page 129).

The above is also supported through the provisions of the National Planning Framework (Ireland 2040), which provides at page 149, explicit support for the proposed Project through the following statement:

> *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 (GDD) Project.*

As regards the effective management of waste, as associated with the co-located sludge hub centre, it is highlighted (also page 149) that:

> *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.*

As a result, the proposed Project can be considered as 'Strategic Infrastructure' under the provisions of the Planning and Development (Strategic Infrastructure) Act 2006. Not only because the type of development proposed is specified in the Seventh Schedule to the Act (as has been outlined above), but also because it "*would contribute substantially to the fulfilment of any of the objectives in the National Spatial Strategy or in any regional planning guidelines*[1] *in force in respect of the area or areas in which it would be situate*" - see Section 37A 2(b) of the Planning and Development Act, (as amended).

As provided for under Section 37B of the Planning and Development Act 2000, as amended (the Act), Irish Water (the applicant) therefore entered into discussions and consultations with An Bord Pleanála (ABP) in relation to the proposed Project (Case Ref.PL06F.PC0152). Six meetings were held with ABP. These were on the 21st January 2013, the 16th February 2014, the 9th July 2015, the 26th June 2017, 20th November 2017, and 14th February 2018. A Board Direction issued on 16th May 2018, where it was decided that the proposed Project constituted strategic infrastructure within the meaning of section 37A of the Planning and Development Act, 2000, as amended, it being a class of development that comes within the scope of the 7th Schedule and would, if carried out, fall within the following paragraphs of Section 37A(2)(a)(b) and (c) of the Act:

a. the development would be of strategic economic or social importance to the State or the region in which it would be situate;
b. the development would contribute substantially to the fulfilment of any of the objectives in the National Spatial Strategy or in any regional spatial and economic strategy[2] in force in respect of the area or areas in which it would be situate;
c. the development would have a significant effect on the area of more than one planning authority.

Please note that a copy of this notice from ABP, dated 16th May 2018, and including a list of the Prescribed Bodies to be consulted in this regard, is included within the statutory documentation submitted with this SID application.

[1] It should be noted that within this context the National Spatial Strategy has recently been superseded by the National Planning Framework – Ireland 2040, whilst new Regional Spatial and Economic Strategies (to replace the existing RPG's) are still in the process of formulation

[2]There are, as yet, no RSES (Regional Spatial and Economic Strategies) in place – the existing RPG's are therefore still applicable. This is likely to be the case until at least Q2 2018.

Following the issuing of this notice by ABP under Section 37B(4)(a) of the Act, and in accordance with the provisions of Section 37E of the Act Irish Water is now making this application for the proposed Project directly to ABP.

This Planning Report is formulated as part of an interdisciplinary design approach, which takes specific site and strategic aspects into account. It should be read in conjunction with the planning application documents, the Environmental Impact Assessment Report (EIAR), a Natura Impact Statement (NIS), and other documentation that accompany this application.

A Compulsory Purchase Order application is also being concurrently submitted to ABP.

1.2 OUTLINE DESCRIPTION OF PROPOSED PROJECT

Chapter 4 (The Proposed Project) of the EIAR accompanying this Planning Report and application, provides the detailed description of the proposed Project and its component parts. This includes a description of the capacities to be developed. Chapter 4 also includes cross references to the relevant planning drawings that give the details of the proposed infrastructure. The section below however, provides a brief overview of the proposed Project.

The development proposed and comprising the proposed Project is required to meet the need for additional wastewater treatment within the Dublin area. This need has been identified in a number of national, regional and local strategic and planning policy documents, a brief overview of which is provided within Section 1.7 and Chapter 3 of this report. As indicated within Chapter 4 of the EIAR, the implementation of the proposed Project will serve the wastewater needs of existing and future drainage catchments in the north, west and north-west of the Dublin agglomeration.

In addition, the proposed Project will have the capacity to provide sustainable treatment for municipal wastewater sludge and domestic septage, generated from within Fingal's municipal WwTPs and septage, to produce a 'biosolid' end product and will utilise the bio-gas produced during the treatment process as an energy source on site.

The proposed Project will be implemented and developed within a single phase, and through at least three construction contracts (ie. Design Build (DB) for the Orbital Sewer and Land-based outfall; DB for the Marine outfall, and Design Build Operate (DBO) for the WwTP), and will comprise the following elements:

- Regional Wastewater Treatment Plant (WwTP), of 500,000PE capacity to be located on a 29.8ha site in the townland of Clonshagh in Fingal
- Sludge Hub Centre[3] (SHC) to be co-located on the same site as the Regional WwTP
- A 13.7km length Orbital Sewer from Blanchardstown to the WwTP at Clonshagh (Clonshaugh), including an Odour Control Unit (max. 10m x 5m and 5m high vent

[3] A sludge hub centre is an engineering technical term used for a large treatment centre for sludge collected from a number of other sludge facilities/ centres

stack) at Dubber (5.2km of a 1.4m diameter rising main and 8.5km of a 1.8m diameter gravity sewer)

- A 600m, 1.5m diameter Connecting Sewer from the North Fringe Sewer (NFS) to the WwTP
- Abbotstown Pumping Station to be located in the grounds of the National Sports Campus on a 0.4ha site
- An 11.3km length, 1.8m diameter Outfall Pipeline from the WwTP to the outfall point approximately one kilometre north-east of Ireland's Eye (5.4km land based and 5.9km marine section)
- Regional Biosolids Storage Facility (RBSF) to be located on an 11ha site at Newtown
- Access Road from existing R139, and new egress point (left-turn only) onto the Clonshaugh Road
- All associated construction compounds and ancillary work areas

The location of the proposed Project is illustrated within Chapter 4 of the EIAR at Figure 4.1, and is replicated here below for ease of cross reference. It is also shown in detail on Planning Drawings Nrs. 32102902 – 2000 to 32102902 – 2014.

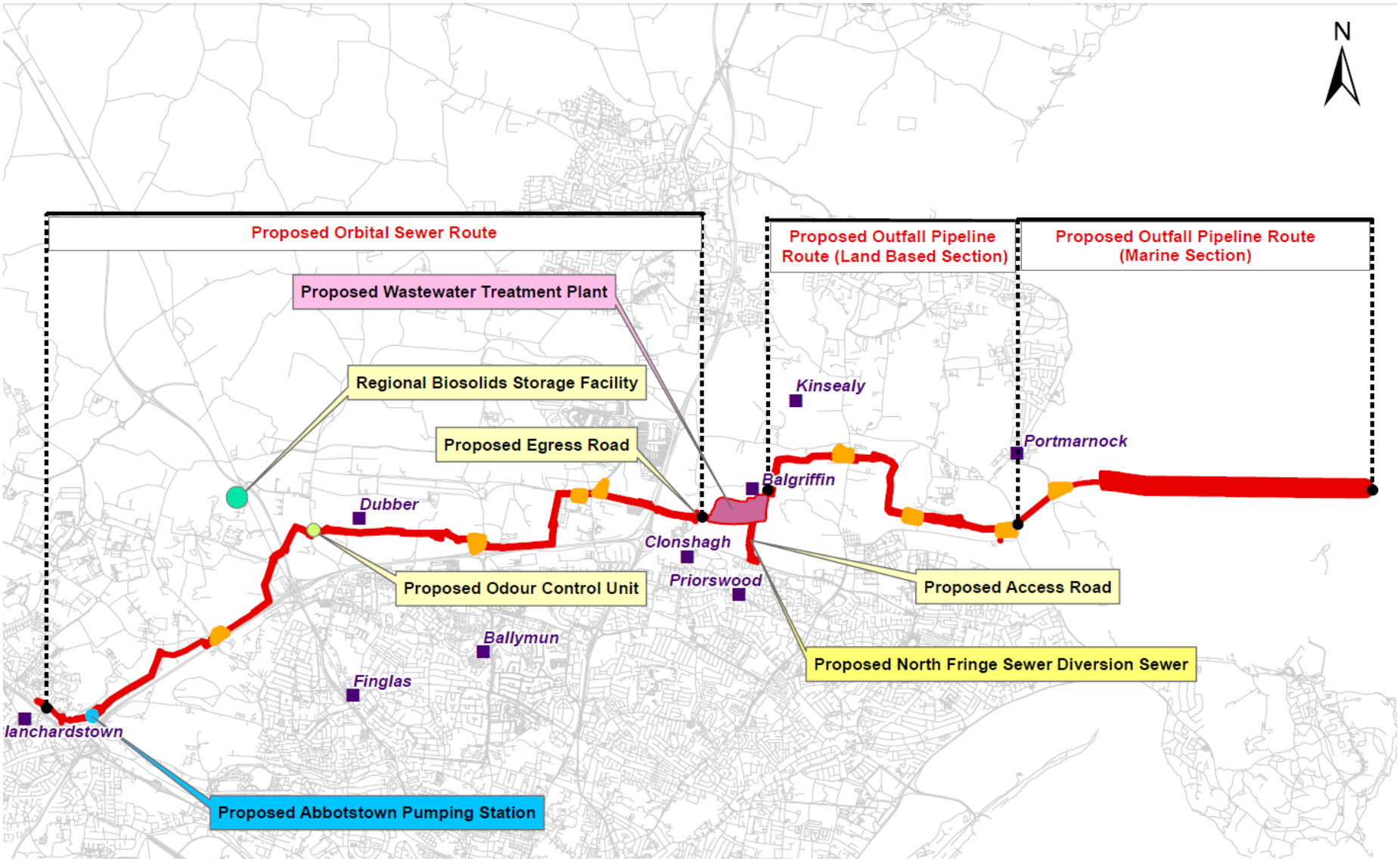


Figure 1.1 Proposed Project Overview (replicated from Fig. 4.1, Chapter 4 of the EIAR)

In effect, implementation of the proposed Project would comprise various components - above ground infrastructure elements, i.e. the regional wastewater treatment plant and sludge hub centre, a pumping station, odour control unit, and the Regional Biosolids Storage Facility; and secondly, below ground infrastructure elements, i.e. the orbital sewer, a North Fringe Sewer diversion connection and the marine outfall pipeline

Below ground elements comprise a 13.7km network of orbital sewers chiefly within the administrative area of Fingal County Council - from Blanchardstown to the proposed WwTP at Clonshagh, with a short initial c.60m section of pipeline within the Dublin City Council administrative area. It also includes 5.4km of land based outfall pipeline from the WwTP at Clonshagh to Baldoyle, and 5.9km of marine based outfall pipeline from Baldoyle to 1km north east of Ireland's Eye, as well as a marine diffuser at this location.

An appraisal process of engineering, environmental and technical options (Chapter 5 of the EIAR – Consideration of Alternatives), in respect of the site selection, design and materials, has been undertaken at a number of junctures during the prolonged project evolution process. The site selection process is also outlined in detail within the Alternative Site Assessment (ASA) reports. These processes concluded that the most feasible, practical and sustainable option, with the least environmental impact, is that as now encompassed within the proposed Project, and subject of this SID application to ABP.

1.3 LEGISLATIVE CONTEXT FOR THE PROJECT

This section sets out the legislative context for the project, and highlights the various consents required for the proposed Project, the applications for which will be lodged either concurrently with, or shortly after, the proposed Project SID application to ABP.

1.3.1 CPO

Section 220(1) of the Planning and Development Act (as amended), encourages ABP to deal in parallel with an application for confirmation of a CPO which relates to a proposed development, where the CPO is for the purpose of effecting development that is required to comply with section 175, "*or any other statutory provision to comply with procedures for giving effect to the EIA Directive*".

In terms of the procedures for giving effect to the EIA Directive, and within the context of the proposed Project, the need for an EIA is briefly summarised within section 1.4 below.

Irish Water, pursuant to Section 7 of the Water Services (No. 2) Act, 2013 is carrying out the functions of a Water Services Authority for the purposes of the Water Services Act, 2007. Irish Water is focused on delivering critical infrastructure necessary to support social and economic development for the country. Therefore, and in accordance with its obligations as a Water Services Authority under the Water Services Act, 2007, Irish Water is progressing the proposed Project.

Section 93 of the Water Services Act, 2007 provides that Irish Water, as exercising the functions of a Water Services Authority, may acquire land for the purpose of performing any of its functions under the Water Services Act, 2007, and that the Planning and Development Act, 2000, Section 182 (Laying of Cables, Wires and Pipelines) and Part XIV (Acquisition of Land) apply to the exercise of the power of a water services authority, thereby providing Irish Water with powers of compulsory purchase. For the reasons as set out within the CPO Engineers Report, it is necessary for Irish Water to use its compulsory

purchase powers under the Water Services Act, 2007, for the purposes of Irish Water's performing its functions under the Water Services Act, 2007, as they relate to the Project. The proposed Project CPO is being lodged with ABP, concurrently with the Planning Application associated with this Planning Report.

1.3.2 Wastewater Discharge Licence

The proposed Regional WwTP will require a waste water discharge licence to be granted by the EPA under the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I No. 684 of 2007) prior to commissioning of the treatment plant. The authorisation process provides for the EPA to place conditions on the operation of such discharges to ensure that potential effects on the receiving water bodies are limited and controlled with the aim of achieving good surface water status and good groundwater status

1.3.3 Foreshore Licence

The proposed Project requires a foreshore licence for that portion of the project which is proposed to be located within the foreshore. The foreshore is the seabed and shore below the line of high water of ordinary or medium tides and extends outwards to the limit of twelve nautical miles (approximately 22.24 kilometres).

The Foreshore Acts 1933 – 2011 require that a Foreshore Licence must be obtained from the Department of Housing, Planning & Local Government prior to the commencement of any works or activity (including the erection of any structures) on State-owned foreshore.

1.4 NEED FOR AN ENVIRONMENTAL IMPACT ASSESSMENT

The proposed Project comprises development within Class 13, Part 1 of Schedule 5 of the Planning and Development Regulations (as amended), specifically:

> "*Waste water treatment plants with a capacity exceeding 150,000 population equivalent as defined in Article 2, point (6), of Directive 91/271/EEC5".*

The EIAR has been prepared in accordance with Environmental Assessment Directive 2014/52/EU and Schedule 6 of the Planning and Development Regulations 2001 (as amended).

The EIAR has also been undertaken having regard to the Environmental Protection Agency (EPA) Guidelines on information to be contained in Environmental Impact Statements (EPA 2002), and the EPA published draft guidelines on information to be contained in EIARs (issued in 2017), and Advice Notes on Current Practice in preparation of Environmental Impact Statements (EPA, 2003) and the European Commission document "Guidance on EIA, EIS Review" (2001).

The EIAR is also part of the documentation required to demonstrate how the Proposed Project complies with various sectoral and planning policies and objectives, and this is further elaborated on within the Planning Report accompanying the concurrent, associated CPO lodged with ABP. Specific directly applicable policies and objectives are also highlighted further within this Planning Report.

The scope of the EIAR has been developed throughout the design process. The final EIAR covers the topics discussed during the EIA consultation process, plus additional items that were added in response to issues that emerged during the detailed work involved in the Environmental Impact Assessment process. Detailed information in regard to the consultation process is set out within the RPS report titled "*Public Stakeholder Participation Report", w*ith a summary chapter provided in Chapter 1 of the EIAR.

The EIAR presents the environmental impacts predicted for this proposed Project. The EIAR sections describe the proposed Project with respect to the environmental headings as outlined in the EPA Guidelines and taking account of the forthcoming changes arising from Directive 2014/52/EU (as described in Section 2.1 of Chapter 2 The EIA Process in Volume 3). They are also highlighted further within Section 1.8 of this Planning Report which provides an overview of the SID application documentation, including an indication of the volumes comprising the EIAR.

The EIAR describes the environmental impacts predicted for this proposed Project. These are provided within Chapter 25 of the EIAR, Residual Impacts.

1.5 NEED FOR A NATURA IMPACT STATEMENT

Directive 09/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive) and Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive), set out various procedures and obligations in relation to nature conservation management, and in particular the conservation of European Sites. 'European Site' replaced the term 'Natura 2000 site' under the European Union (Environmental Impact Assessment and Habitats) Regulations 2011 (S.I. No. 473 of 2011). European Sites comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). A key protection mechanism is the requirement to consider the possible nature conservation implications of any plan or project on European Sites. Appropriate Assessment (AA) is the process that considers the possible effects of a plan or project on the European Sites network.

In accordance with these requirements, the proposed Project has been assessed to consider whether there are likely significant effects from the proposed Project on European Sites. Screening concluded that likely significant effects could be excluded for a number of European Sites. Likely significant effects could not be excluded for Baldoyle Bay SPA and Baldoyle Bay SAC, Rockabill to Dalkey Island SAC and Lambay Island SAC and Ireland's Eye SPA.

An Appropriate Assessment (AA) is required to conclude whether adverse effects upon the integrity of these European Sites will occur. An AA involves the submission of a Natura Impact Statement (NIS) by the 'developer' to ABP, and publication of the NIS so that the public can offer submissions and observations thereon, and a determination by ABP as to whether or not the proposed Project would adversely affect the integrity of a European Site. A NIS is a report comprising the scientific examination of a project and the relevant European Site(s) to identify and characterise any possible implications of the plan or project individually, or in combination with other plans or projects, in view of the conservation objectives of the European Site(s), and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to

enable the carrying out of an AA. A NIS has been prepared for the proposed Project and is being submitted to ABP, as the competent authority, as a separate accompanying document to the SID Application documentation and EIAR.

1.6 PROJECT CONTEXT & STRATEGIC PLANNING OVERVIEW

The *Greater Dublin Strategic Drainage Study* (GDSDS) was commissioned as a result of the broadening gap between the developing load in the Greater Dublin Area, and the maximum load which can be delivered to and treated at the existing treatment plants in the catchment and primarily at Ringsend WwTP. In order to address this, the *GDSDS Final Strategy Report 2005*, recommended the upgrading of all existing wastewater treatment plants in the GDA, the construction of a Regional WwTP in North County Dublin discharging into the Irish Sea, and an orbital drainage network to divert either in full or in part, some existing foul drainage catchments to this new WwTP.

The *Strategic Environmental Assessment 2008* of the GDSDS endorsed the fundamental concept and scale, but cautioned that the site selection needed to take place in a process of rigorous appraisal of alternatives.

Arising from the completion of the SEA of the GDSDS, a key element of the preferred strategic drainage strategy (which included a comprehensive site selection process as described in preceding chapters), was the diversion of wastewater from existing and newly developed areas in the north, west, and north-west of the GDA including; Blanchardstown, Mulhuddart, East Meath and Kildare, to the new regional WwTP.

The critical drainage catchments in the GDA that have an influence on the required treatment capacities of the proposed regional WwTP comprise:

- The existing and future residual catchment of Ringsend WwTP;
- The Blanchardstown (9C sewer) sub-catchment of Ringsend WwTP. This includes the Meath towns and villages of Ashbourne, Ratoath, Kilbride, Dunboyne and Clonee;
- The North Dublin (North Fringe sewer and North Dublin Drainage Scheme sewer) sub-catchment of Ringsend WwTP; and
- A number of additional catchments in the GDA also influence the future required treatment capacity of the new regional WwTP. The diversion of flows and load in excess of the ultimate treatment capability of the individual wastewater treatment plants may be required from catchments including:
  - Swords WwTP catchment;
  - Malahide WwTP catchment;
  - Lower Liffey Valley (Leixlip WwTP) catchment (includes Leixlip, Celbridge, Maynooth, Kilcock and Straffan);

The existing Greater Dublin Area Regional Planning Guidelines (GDP RPG's) and the Fingal County Development Plan (2017-2023), provisions, policies and objectives provide a clear spatial framework for the proposed Project.

Within this context, the RPG's highlight the necessity of the proposed Project and works to be provided within Section 6.5:

> *The GDSDS recommendations have undergone a Strategic Environmental Assessment and one key recommendation, the development of the new Greater Dublin Regional Drainage Project[4]- Regional Waste Water Treatment Plant, Marine Outfall and Orbital Drainage System on the north coast of the GDA, is now being examined in more detail; with a detailed SEA and Habitats Assessment taking place on a number of options and possible solutions.*
>
> *In many locations, the scale of investment in new facilities has only just kept pace with the levels of growth experienced, necessitating the need for the development of further facilities to meet the RPG Strategy. As a result, the need for investment in new treatment facilities to serve the GDA is both pressing and immediate as key existing facilities and networks are reaching capacity.*

In addition, the Fingal County Development Plan (2017–2023) notes that:

> *Irish Water is developing the Greater Dublin Drainage (GDD) Project (previously led by Fingal County Council). The GDD is a regional wastewater project designed to serve the Greater Dublin Area by augmenting the Ringsend Wastewater Treatment Plant. It implements the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS) Final Strategy and the SEA of the GDSDS.*
>
> *The project includes:*
> *· A planned treatment plant at Clonshaugh in Fingal;*
> *· A marine outfall discharging approximately 1km north east of Irelands Eye; and*
> *· An orbital sewer with two pumping stations – at Abbotstown, Blanchardstown and Grange, Baldoyle – which will divert wastewater from the southern areas of Fingal and the north of Dublin City to the new treatment plant."*

The above provisions are further supported through policies and recommendations, and these are outlined in more detail within chapters 3 and 4 of this report.

Whilst there is some small scope change to the Project as now proposed, to that as identified above[5], it is considered that the above planning framework nonetheless sets a clear and unambiguous context for the positive consideration of the proposed Project in a co-ordinated, sustainable and planned manner.

1.7 RATIONALE FOR THE PROPOSED PROJECT

The specific 'Planning Need' or 'Rationale' for additional and alternative wastewater treatment within the Greater Dublin Area (GDA) has been established in the Greater Dublin Strategic Drainage Study, and subsequent research and analysis, and is also further outlined within this Planning Report. The need has been further outlined and established within Chapter 3 of the EIAR (Need for the proposed Project), and an internal

[4] Now entitled "Greater Dublin Drainage (GDD) Project"
[5] A pumping station is no longer proposed at Grange, Baldoyle, and the amended scheme now also includes provision for a proposed North Fringe Sewer diversion connection of 600m

IW 'Strategic Need' report[6] stress tested the conclusions of, and inputs to the GDDS, to ensure the rationale remained valid following the passage of time. The need for the proposed Project has been further verified and substantiated through the results of the 2016 CSO census data.

With regard to the Planning Need' for the proposed Project, this is acknowledged in a number of national, regional and local policy and planning documents, and includes:

The ***Greater Dublin Strategic Drainage Study*** (GDSDS), 2005, was commissioned to carry out a strategic analysis of foul and surface water systems within the GDA as a result of a number of issues, including increased overloading on existing systems, marked deterioration in water quality, flooding risks and capacity. The objectives of the GDSDS were to identify policies, strategies and projects for the development of a sustainable drainage system for the GDA, and in 2005, the GDSDS Final Strategy Report 2005 recommended, "*as the optimum drainage solution from a range of alternative scenarios*"; the upgrading of all existing wastewater treatment plants in the GDA, the construction of a large WwTP in North County Dublin discharging to the Irish Sea, and an orbital drainage network to divert either in full, or in part, some existing foul drainage catchments to this new WwTP.

The ***Strategic Environmental Assessment*** (SEA) ***2008*** of the GDSDS, concluded that a new regional wastewater treatment plant should be built in the Northern Greater Dublin Area, with an orbital sewer serving existing and future sub-catchments in the north, west, and north-west of the Ringsend WwTP catchment area; and that the outfall should be located along the North Dublin coastline, following a detailed site selection process.

In a similar regard, the ***National Planning Framework (Ireland 2040)*** **(NPF)** identifies a number of key growth enablers and national strategic outcomes for consideration in developing the National Investment Plan that will support the NPF. In respect of the sustainable management of water and other environmental resources, Page 149 of the NPF provides explicit support for the GDD Project through the following statement:

> *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 (GDD) Project.*

The ***Forfás Report: Assessment of Water and Waste Water Services for Enterprise,*** September 2008, identified the need for priority investment in future wastewater provision in the key development centres, in order to ensure that these locations had the capability to meet the future water and waste water capacity needs to enable future enterprise development. The GDA was identified as one of the key development centres for this priority investment.

The ***Water Services Investment Programme 2010 – 2012***, a Department of Housing, Planning and Local Government initiative, identified the need '*for investment in wastewater infrastructure over the coming years*', both to facilitate growth and '*to ensure*

[6] *Irish Water Greater Dublin Drainage Strategy: Overview & Future Strategic Needs Asset Planning (May 2018)*

compliance with the Water Framework Directive'. The programme specifically identified the Greater Dublin Regional Drainage Project: North Dublin Treatment Plant within the list of schemes at planning stages.

With the transfer of responsibilities to Irish Water, this programme ended, and has been succeeded by the Irish Water, *Water Services Strategic Services Plan* (2014-2021).

The ***Dublin Region Water Services Strategic Plan 2009*** (Draft) recognised the need for a new WwTP and outfall to serve the expanding environs of the Dublin Metropolitan area. It further identified that the provision of this infrastructure would be essential in facilitating new development in the Dublin Region.

The ***Irish Water Business Plan*** – ***Transforming Water Services in Ireland to 2021,*** notes that in respect of existing wastewater capacity, the 'Greater Dublin Area depends on one large treatment plant at Ringsend which requires both process upgrading and capacity expansion. The Business Plan also outlines the fact that Irish Water is '*focussed on delivering critical infrastructure necessary to support social and economic development for the country…To achieve these objectives Irish Water will assess the demands for water and wastewater services based on national and regional spatial policies and plans, together with population and economic growth predictions*'.

The IW ***Capital Investment Plan 2014-2016*** identifies the need to continue '*progressing the plans for new capacity for both water and wastewater to meet the long term needs of the Greater Dublin Area (GDA)'.*

Irish Water's ***Water Services Strategic Plan*** (2014-2021) – *A Plan for the Future of Water Services* (hereinafter referred to as WSSP) sets out strategic objectives and aims for the delivery of water services up to 2040, and is reviewable on a five-year basis. The Plan highlights Irish Water's obligations under sections 33 and 34 of the Water Services (No. 2) Act, 2013, in so far as practicable, that it align with national and regional spatial planning policy and have regard to local spatial planning policy in respect of developing strategies and planning investment in water services. It notes that the primary objective 'is to support population and economic growth' in line with such policies and objectives. Chapter 7 of the WSSP outlines Irish Water's aims, strategies and objectives in this regard. The WSSP also highlights that significant capital investment and substantial improvements to water supply capacity, quality and reliability are required in addition to upgrading of our wastewater infrastructure, both treatment plants and collection networks, in order to improve the environment.

The ***Infrastructure and Capital Investment 2016-2021*** (the Government's Capital Investment Plan as published (September 2015) by the Minister for Public Expenditure & Reform), outlines the Government's framework for infrastructure investment within the country over the plan period. It identifies that the country's infrastructure must be capable of facilitating economic growth and recovery.

The Irish Water ***National Wastewater Sludge Management Plan,*** (NWSMP), published in 2016, reiterates the provisions contained within the Fingal Sludge Management Plan which envisaged the development of a sludge hub as part of the GDD WwTP, with sludge cake being transferred from proposed sludge satellites at Swords,

Malahide, Barnaghheragh, Portrane/ Donabate and Oldtown, to the proposed Sludge Hub. This is reiterated in Section 7.4.9 of the NWSMP. Section 9.5 – 9.7 outlines the considerations and criteria which are relevant in respect of the location of new or upgraded sludge and biosolids storage facilities.

The ***Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022*** clearly highlight that provision of adequate wastewater treatment capacity is becoming a critical issue within the GDA. The Guidelines include strategic recommendation *PIR17* for the 'identification and development of a suitable site for the Greater Dublin Regional Drainage Project- Regional WwTP, Marine Outfall and Orbital Drainage System…"

Eastern-Midlands Region Waste Management Plan (EMRWMP), 2015-2021
The Eastern-Midlands Regional Waste Management Plan preceded the publication of the National Wastewater Sludge Management Plan. It does however recognise the NWSMP as a core component of the waste plan, with key objectives of the sludge plan being incorporated into the waste plan. Section 2.2 specifically provides that "*in the event of conflict arising between an objective in the waste plan and that of a city or county development plan, the waste plan objective takes precedence and permission may be granted*". Policy A3 sets out to "*Contribute to the improvement of management performance across all waste streams through the implementation of policy actions and monitor progress towards national targets*."

In relation to the management of sludges in the region, Policy H1 in Section 7.4.7, provides that local authorities will: "*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 Directives*."

The **Dublin Region Water Services Strategic Plan (2009)** (Draft) recognised the need for a new WwTP and outfall to serve the expanding environs of the Dublin Metropolitan area. It further identified that the provision of this infrastructure would be essential in facilitating new development in the Dublin Region.

The **Fingal Development Plan 2017-2023,** identifies in development objective *WT03,* the commitment to '*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*; and the '*need to work closely with Irish Water to ensure that adequate provision of infrastructure is provided to ensure that wastewater and water services will not be a limiting factor in achieving forecasted growth targets in the future*'.

The **Fingal Sludge Management Plan 2013***,* has been superseded by the National Wastewater Sludge Management Plan. The FSMP did however recommend a sludge hub centre to be co-located on the site of the proposed Regional Wastewater Treatment Plant as part of the Greater Dublin Drainage project, to treat and thermally dry municipal wastewater sludge arising in Fingal.

The **Dublin City Development Plan 2016-2022** highlights the infrastructural challenges facing the Dublin region, particularly in the supply and demand for high-quality

drinking water and for wastewater treatment. It notes that '*progressing the development of the Greater Dublin Regional Wastewater Treatment Plant, Marine Outfall and orbital sewer to be located in the northern part of the Greater Dublin Area is essential to the future growth of the Dublin region*'; and commits, through policies SI1 and SI2, to support and facilitate Irish Water in the development and improvement of water and wastewater systems, including the '*development of the Greater Dublin Regional Wastewater Treatment Plant*'.

The **Meath County Development Plan 2013–2019** acknowledges the strategic role of the development of the Greater Dublin Strategic Drainage Study and its role in the future sustainable development of the County and the region. It is the policy of the Council to ensure that all developments within its jurisdiction have regard to the policies expressed in the Greater Dublin Strategic Drainage Study.

The **Kildare County Development Plan 2017-2023** acknowledges that wastewater collection and treatment capacity within the County has struggled to keep pace with development, and notes that the '*capacity of treatment works and the associated networks will be a key factor that will influence the future development of the county*'. The Development Plan highlights the fact that the County is dependent on strategic national and regional solutions to the provision of water and wastewater infrastructure, and notes further that the Greater Dublin Strategic Drainage Study delivered an overview of the performance of the drainage infrastructure in the region's catchments and proposed infrastructural improvement works to facilitate anticipated growth.

The **Portmarnock South Local Area Plan (LAP), 2013** (extended from July 2018-July 2023) relates to c. 86 hectares of land located to the south and east of Portmarnock train station. The LAP outlines that sufficient services are essential to enabling development in the area and highlights service capacity pressures in the LAP area. The LAP acknowledges that the GDD Project will provide a long-term solution for wastewater network and treatment services to serve the area

The **Dardistown Local Area Plan (LAP) 2013** (extended from November 2017-November 2022), relates to approximately 154 ha of lands which are bounded by Dublin Airport to the north, the M50 to the south, and the Naul and Swords Roads (R108 and R132) to the west and east respectively (see figure 3.2 below). The LAP identifies that "*there is no existing public foul sewer within the LAP lands*" and goes on to express that new sewer connections will be required in order to accommodate the supply of serviced lands.

A detailed synopsis of the current planning context, including policy provisions for the proposed development is set out further within this report.

1.8 LIST OF DOCUMENTS ACCOMPANYING THE APPLICATION

A number of supporting documents are being submitted to ABP as part of this SID application process. These documents include the standard documents that normally accompany such applications that are subject to environmental impact assessment, the full suite of which (for this SID application) is illustrated in Table 1.1 below:

		Details	
Statutory Documentation	Application Form & Particulars	SID Application Cover Letter	
		SID Application Form	
		Newspaper Notice	
		Site Notice	
		Notification Letters sent to Prescribed Bodies	
Planning Documentation	Planning Reports	SID Planning Report	
	Technical Reports/ References	Greater Dublin Drainage Strategy: Overview & Future Strategic Needs	
		GDD Engineering Design Report	
		RBSF Engineering Design Report	
		RBSF Architectural Design Report	
		GDD Outline Construction Environmental Management Plan	
		RBSF Outline Construction Environmental Management Plan	
		GDD Flood Risk Assessment	
		RBSF Flood Risk Assessment	
		Public Stakeholder Participation Report	
		Community Benefits Scheme	
	Drawings	GDD Drawling Schedule and Drawings	
		RBSF Drawling Schedule and Drawings	
		Location of Site Notices	
Environmental Documentation	NIS	Appropriate Assessment Screening & Natura Impact Statement	
	EIAR Volume 1	Non-Technical Summary	
	EIAR Volume 2A	Introduction	1. Introduction
			2. The Environmental Impact Assessment Process
			3. The Need for the Proposed Project
			4. Description of the Proposed Project
			5. Consideration of Alternatives
	EIAR Volume 2B	Appendices	Appendices relevant to Volume 2 Part A of the EIAR
	EIAR Volume 3A	Main Report for the Proposed Project	6. Population and Human Health: Population
			7. Population and Human Health: Human Health
			8. Marine Water Quality
			9. Biodiversity (Marine)
			10. Biodiversity (Marine Ornithology)
			11. Biodiversity (Terrestrial and Freshwater Aquatic)
			12. Landscape and Visual
			13. Traffic and Transport
			14. Air Quality, Odour and Climate
			15. Noise and Vibration

			16. Archaeological, Architectural and Cultural Heritage
			17. Hydrology and Hydrogeology
			18. Soils and Geology
			19. Agronomy
			20. Waste
			21. Material Assets
			22. Risk of Major Accidents and/or Disasters
			23. Cumulative Impacts and Environmental Interactions
			24. Summary of Mitigation Measures
			25. Summary of Residual Impacts
	EIAR Volume 3B	Appendices	Appendices relevant to Volume 3 Part A of the EIAR
	EIAR Volume 4A	Main Report for the Regional Biosolids Storage Facility	1. Existing Environment
			2. Planning and Policy Context
			3. Population and Human Health
			4. Water
			5. Biodiversity - Marine
			6. Biodiversity - Terrestrial
			7. Land and Soils
			8. Air and Climate
			9. Noise and Vibration
			10. Odour
			11. Cultural Heritage
			12. Material Assets
			13. Traffic
			14. Landscape
			15. Risk Management
			16. Environmental Interactions
			17. Summary of Mitigation
			18. Summary of Residual Impacts
			19. Summary of Cumulative Impacts
	EIAR Volume 4B	Appendices	Appendices relevant to Volume 4 Part A of the EIAR
	EIAR Volume 5A	Figures	Figures relevant to Volume 2 and 3 of the EIAR
	EIAR Volume 5B	Figures	Figures relevant to Volume 4 of the EIAR
	EIAR Volume 6	Proposed Project Photomontages	

Table 1.1 Outline Overview of SID Application and EIAR Documentation

Three (3No.) hard copies and seven (7No.) electronic copies of the documents and drawings are submitted to ABP.

It should be noted that an application for the compulsory acquisition of land is also being lodged in tandem with this Section 37(E) SID application.

1.9 A NOTE ON DRAWING SCALES

The drawings that accompany this application have been prepared to ensure that they are legible having regard to the scale of the project itself, and have been prepared in accordance with the statutory provisions of the Planning and Development Regulations 2001 (as amended).

2. PROPOSED PROJECT

The proposed Project has an extensive cumulative site area within the administrative area of Fingal County Council, and includes a short c. 60m corridor section within Dublin City Council administrative area, and a component within the marine environment off North County Dublin between Baldoyle Bay and Ireland's Eye. Construction of the proposed Project, comprises linear infrastructure development during the construction and implementation stage, but is limited to specific identified sites during the operational phase thereafter - ie. The WwTP and Sludge Hub site, Regional Biosolids Storage Facility, the Abbotstown pumping station, Odour Control Unit (OCU), and the multiport marine diffuser on the final section of the marine outfall.

2.1 SITE LOCATIONS AND DEVELOPMENT DESCRIPTIONS

The general site location, pipeline route, and site locations and descriptions of the component parts of the GDD project, are provided in detail within Chapter 4 of the EIAR.

This section of the Planning Report chiefly provides additional supporting spatial and land use context detail, relating to the lands which are proposed to accommodate the main land-based elements of the proposed development. This refers specifically to the co-located regional wastewater treatment plant and sludge hub centre; the Abbotstown pumping station; the Regional bio-solids storage facility; the OCU, and the pipeline corridor route (orbital sewer, NFS connection pipeline, and the outfall pipeline).

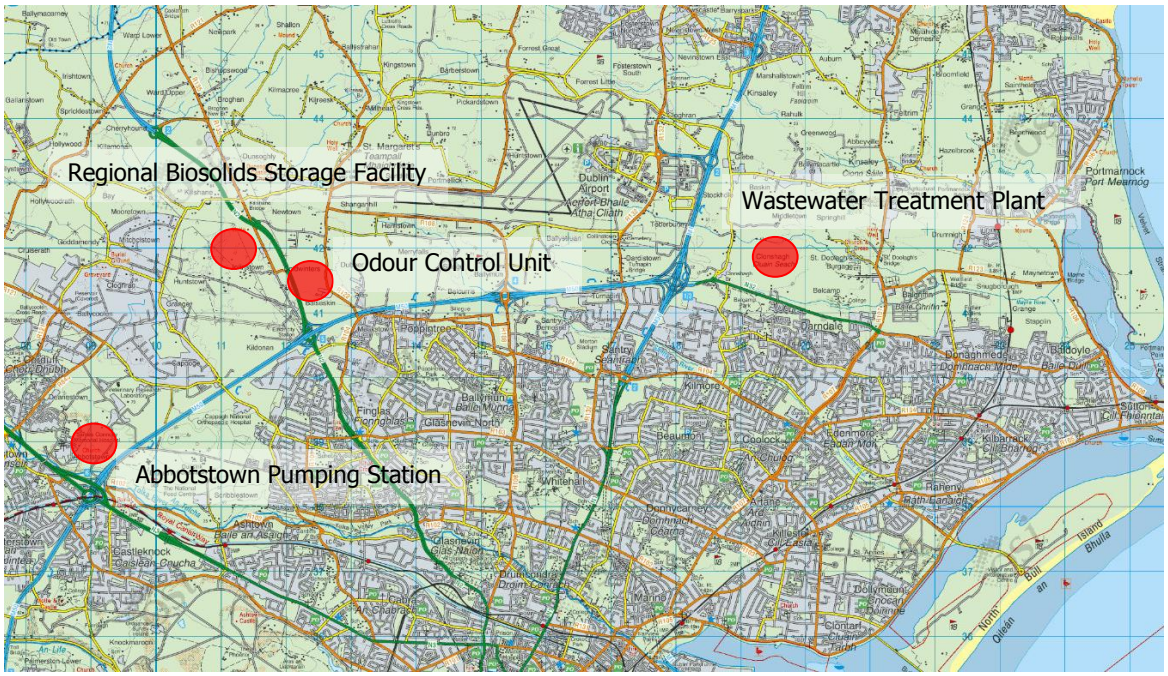


Figure 2.1 Location of Proposed Main Above-Ground, Land-Based Elements of GDD
Source: Myplan.ie

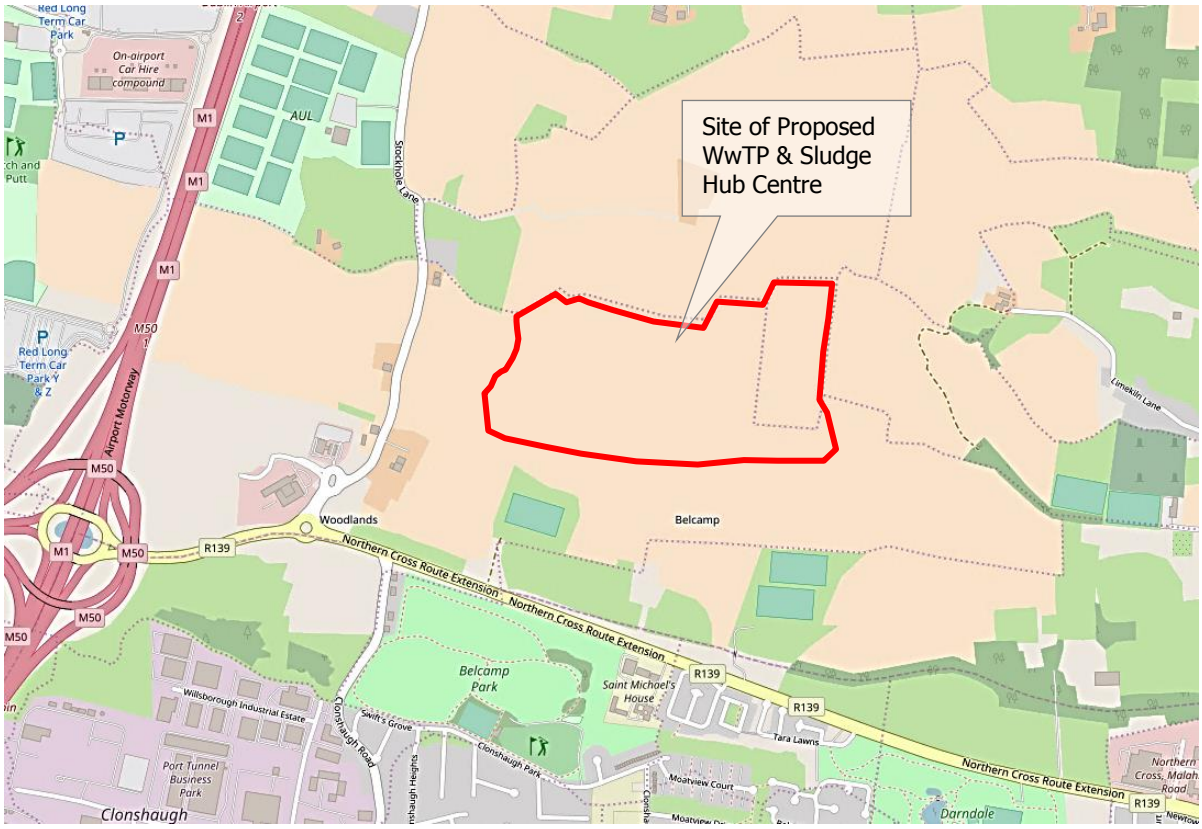
2.1.1 Wastewater Treatment Plant and Sludge Hub Centre Site

The proposed 29.8ha WwTP site (indicated above and within Figure 1.1 previous) is located within an urban fringe area of Dublin, in the townland of Clonshagh, to the east of the Clonshaugh Road/ Stockhole Lane, and is located in open agricultural land, primarily

in tillage, vegetables and grassland. The surrounding roads within the area are characterised by low-density one-off residential properties.

The residential areas of Belcamp and Darndale are situated c. 0.8km to the south on the opposite side of the R139, and the Balgriffin and Fingal Cemeteries are located approximately 0.75km and 1km respectively, to the east. Significant areas of car parking, associated with the operation of Dublin airport are located approximately 1.2km to the north-west, on the opposite side of the M1. A number of industrial estates/ Business Parks are also located within relative close proximity (between 1km and 1.75km), and ranging from the south to the west of the proposed WwTP site.

The proposed access road to the WwTP site is from the existing R139 (formerly N32), providing a left in only arrangement. Egress from the WwTP site will be provided onto the existing Clonshaugh Road to the west of the site, which is 320m in length, with a 'left-out' arrangement. The realignment of the Malahide Road (Malahide Road to Stockhole Lane) is a stated objective of the Fingal County Development Plan, 2017 – 2023 (Objective MT41[7] and associated Table 7.1 and Drawing 11. The alignment of one road forming part of this proposed road scheme (the east-west distributor road) forms the southern boundary of the proposed WwTP site. The above-outlined arrangement has been assessed within the Traffic Study within Chapter 13 of the EIAR. Figure 2.2 below illustrates the site location context and provides an indicative site layout for the WwTP and sludge hub centre.



[7] "*Objective MT41: Seek to implement the Road Improvement Schemes indicated in Table 7.1 within the Plan period, subject to assessment against the criteria set out in Section 5.8.3 of the NTA Transport Strategy for the GDA, where appropriate and where resources permit. Reserve the corridors of the proposed road improvements free of development.*"

Figure 2.2 Location & Indicative Layout of Proposed WwTP & Sludge Hub Centre Site Plan

The proposed WwTP and SHC comprise relatively low rise fully enclosed treatment tanks of various shapes and size, and associated buildings of a maximum height of 18 metres. The WwTP will incorporate a 500,00PE design capacity. The proposed layout also includes additional space provision to enable future capacity extension which will arise as a result of additional waste water loading as the catchment develops. Such future provision will also be subject to the necessary relevant consent procedure(s).

As the construction of the WwTP and SHC will be under a DBO contract, three alternative layouts for the site are being submitted with the SID application in order to provide some degree of flexibility with regard to final implementation. Chapters 3 (Need for the Project) and 4 (Project Description) of the EIAR provide additional detail with regard to the need and description of the proposed WwTP and sludge hub centre.

2.1.2 Abbotstown Pumping Station

The proposed pumping station site comprises an area of 0.4ha, and is located approximately 1.5km south-east of Blanchardstown Town Centre. The pumping station will be located within the grounds of the National Sports Campus Development Authority (NSCDA)[8] to the immediate north and alongside the M50. The lands within this area currently largely comprises open farmlands sloping from north to south.

The National Aquatic Centre, NSC Multi-Sport Pitches and National Horse Sport Arena, which all form an integral part of the NSCDA, are located to the north-west at Deanestown, whilst the grounds of Connolly Memorial Hospital adjoin the subject site to the immediate south and south-west. The Tolka Valley is also located to the south, with the N3 being located to the south-east. Abbotstown House and Curtilage is located to the

[8] The NSCDA lands also formerly accommodated the State Laboratory, Marine Institute and the Department of Agriculture and Food Laboratories and Farm.

North of the proposed site. The site will be accessed off an existing internal access road within the NSCDA.

The proposed pumping station site at Abbotstown is of a relatively small scale, and will comprise a building which is a maximum of 10m in height, with an above-ground floor area of 305m^2. The pump station is proposed as a traditional style structure that has been designed to reference the nearby St Francis Hospice building.

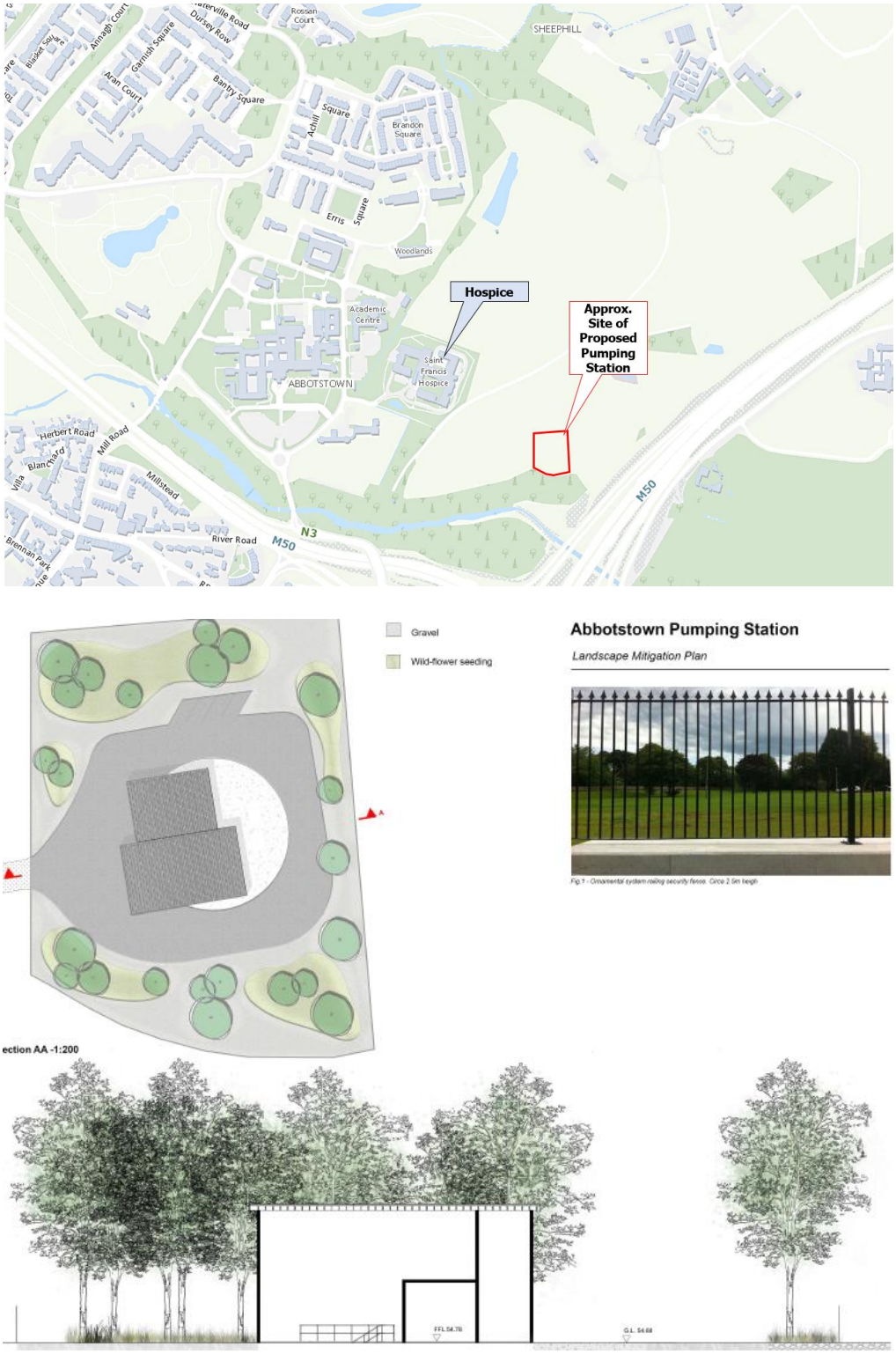


Figure 2.3 Proposed Abbotstown Pumping Station

2.1.3 Regional Biosolids Storage Facility

The proposed site for the RBSF is located in the townland of Newtown in Fingal, approximately 1.6km north of the N2/M50 interchange (Junction 5 (Finglas) and on the western side of the N2 national road. It is approximately 1.5km west of Dublin and is accessible via the R135 regional road which forms its eastern boundary. It is approximately 11ha in area, and is situated north the of Viridian Huntstown power station. There are a number of businesses to the east and north of the site, along the N2.

The site is bordered to the east by the N2 (Finglas to Ashbourne dual carriageway), and to the west by a small stream which is a tributary of the Huntstown Stream, beyond which lies the Huntstown Quarry, which is operated by Roadstone. The stream cuts deeply into the ground, forming steep banks at the south-western corner of the site. The majority of the surrounding landscape is agricultural in nature. The land slopes gently from south to north, with the wider landscape being generally flat to the south approaching the M50.

The proposed RBSF site has previously been partially developed (i.e. road infrastructure, drainage, power, boundary treatments, electricity and telecommunications, access/egress gates to the R135 Road) by Fingal County Council for a waste recycling centre relative to a Section 175 approval by ABP (Ref. PLO6F.EL.2045), dated 21 April 2006. The site location context and an indicative site layout are illustrated below at Figure 2.4. Volume 2, Chapter 4: Description of the proposed Project, and the entire Volume 4 (EIAR for the RBSF) outlines the specific environmental aspects relating to this new facility.

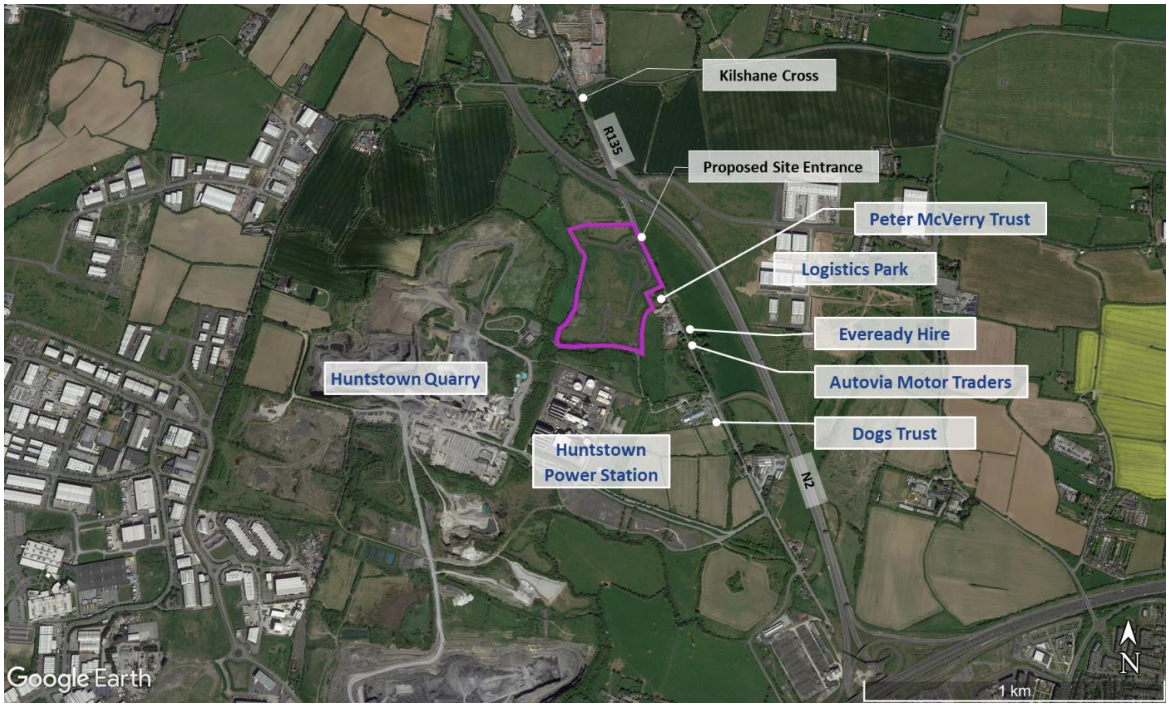


Figure 2.4 Site Location and Indicative Site Layout of Proposed RBSF

The Proposed RBSF Component will be required to ensure that the proposed Project can operate efficiently and effectively. The projects combined will provide the wastewater infrastructure that is essential to accommodate the planned growth of the wider GDA.

2.1.4 Orbital Sewer & Outfall Pipeline Corridor

The proposed orbital sewer will run from within the grounds of Waterville Park, Blanchardstown where it intercepts with the existing Blanchardstown 9C sewer. This infrastructure will also include an Odour Control Unit (OCU) at Baleskin/ Dubber, which incorporates a stack height of 5m above ground level. The OCU is relatively small in size, measuring a maximum of 10m x 5m (footprint).

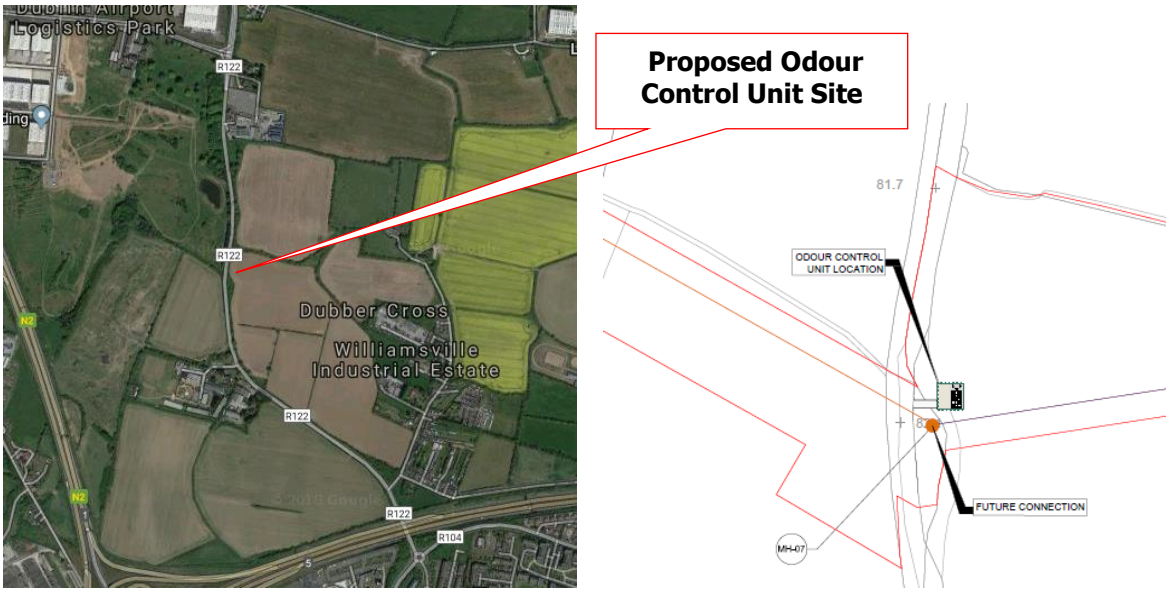


Figure 2.5 Site Location and Indicative Site Layout of Proposed OCU

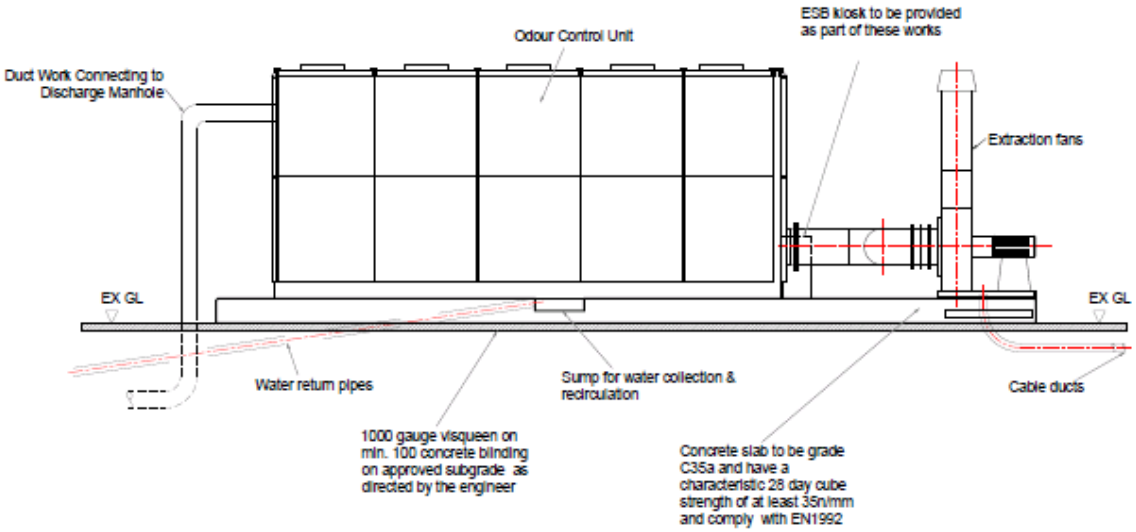


Figure 2.6 Indicative Elevation of Proposed OCU

The route of the proposed orbital sewer is proposed through the grounds of Connolly Hospital and the NSCDA to the proposed Abbotstown pumping station, from where it runs generally parallel to the M50 to Clonshagh. The lands through which the proposed orbital sewer route passes, generally comprise open fields with agriculture as the main land use pattern.

The proposed network of orbital sewers and the outfall pipelines will be located underground, entirely within the administrative area of Fingal County Council. Due to its linear nature, the orbital sewer network passes beneath lands with a wide variety of land use zoning designations in the Fingal County Development Plan 2017-2023. Notwithstanding, as it is located underground, the proposed network will not prohibit the use of surrounding lands for agricultural purposes and will not have any negative impact on these land use zonings, aside from regard being had to the alignment of the sewer being required to be taken into account in the design stages of future developments.

It is proposed that the majority of the pipelines will be constructed by traditional 'open-cut' techniques, and that tunnelling will be used to cross all watercourses, roads and the Dublin-Belfast rail line. Thus, the proposed tunnelling process to be employed during construction, and the reinstatement of all lands above ground to their original state, as part of the development works, will ensure that there will be minimal impact on land use and zoning above ground level. Further detail in respect of the construction methodology is included within the Outline Construction Environmental Management Plan (CEMP), and temporary compounds (which will be reinstated) are also indicated on the Planning Drawings.

2.2 SITE PLANNING HISTORY

This section of the planning report provides a brief description of the planning application files most relevant to the subject planning application and proposed Project.

A review of the planning history for the above ground elements of the project (i.e. the regional WwTP and Sludge Hub Centre, the pumping station at Abbotstown, and the RBSF) was undertaken in order to identify any relevant applications that might influence or impact on their development.

In order to ensure that accurate and up-to-date records have been kept of planning applications which will/ may impact the proposed Project, a 'watching brief' has been kept of all such applications lodged in the Fingal County administrative area (and within the c.60m section of the corridor situated within the Dublin City Council administrative area), and particularly within the area(s) relevant to the proposed Project. A planning history search was also conducted using the Fingal County Council ePlan system as well as that of An Bord Pleanála (for any relevant SID projects), in order to confirm the relevance of these, and any possible other extant planning permissions.

2.2.1 WASTEWATER TREATMENT PLAN & SLUDGE HUB CENTRE

In respect of the proposed WwTP site, the planning search confirmed that no development applications have been permitted on the site proposed for the WwTP.

It is noted from a review of other relevant applications in the area that permission was refused to Park Developments, in 2003, for the development of a 225m diameter gravity foul sewer along part of Stockhole Lane to the west of the regional WwTP site (Fingal Ref. F02A/1570). The reasons for refusal included: 1. The design of the proposal was excessive in scale and appeared to serve a significantly larger catchment area than that indicated on the lodged plans and documentation. 2. The Planning Authority was not satisfied the Applicant had sufficient legal interest in the application lands.

Notwithstanding the above, it is submitted that the application as highlighted above, which was associated with private commercial development, does not set a precedent in relation to the subject application, given that any pipelines associated with the proposed GDD project are part of a wider, integrated, regional public infrastructure provision development proposal, that is explicitly supported in national, regional and local planning policy, as is set out in this planning report.

The zoning of the lands across the proposed road to the south of the actual site of the proposed WwTP, owned by the IDA (HT – High technology/ High technology manufacturing), has influenced the design of the overall site. There are currently no 'live' planning applications on this land, however, the design team has presumed that there will be high technology employment centres in the future[9], and have addressed the road frontage at this point accordingly. The architectural treatment along this road frontage is discussed in within Chapter 12 (Landscape and Visual) of the EIAR

2.2.2 ABBOTSTOWN PUMPING STATION

One planning application (Planning ref. F97A/0415) was submitted to Fingal County Council in May 1997, that included the lands of the proposed pumping station at Abbotstown. Under this planning application reference, permission was granted for the conversion of former livestock housing into Microbiology Laboratory at Brown's Buildings, Abbotstown Farm, Castleknock.

No development has occurred on this site under the terms of the permission granted, and the permission has since expired.

[9] As envisaged under the Fingal County Council Clonshaugh HT Masterplan 2016

In August 2008, Fingal County Council granted permission (Planning Reference F08A/0830) to St Francis Hospice for a new two-storey hospice building[10] on the site immediately adjacent to the west of the proposed pumping station. This permission has been implemented and that site now accommodates the grounds of the St Francis Hospice.

There is no further planning history associated with the actual pumping station site location, although the wider NSCDA lands have been subject to various planning applications associated with their use as a national multi-purpose centre for sports.

2.2.3 REGIONAL BIOSOLIDS STORAGE FACILITY SITE

The RBSFS has been subject of a planning application, by Fingal County Council, for a waste recycling centre – Ref. PL06F.EL.2045. The components of this application included a C&D waste recovery facility; a biological waste treatment facility; a waste transfer facility, and a sludge hub centre treating 26,511tpa of municipal sludge.

It is noted that in terms of the policy/ spatial planning context of this application at that time, the Dublin Waste Management Plan 2005-2010 (WMP), contained the following provisions:

> *A second biological treatment facility to be developed to serve the northern catchment, again with a capacity of up to 45,000 tonnes/ annum. A preferred location at Kilshane has been selected, as part of an integrated waste management facility. Fingal County Council is developing this facility on behalf of the four Local Authorities*.

Under Materials Recovery Capacity/Waste Transfer, Section 18.6 of the WMP, relevant policies read as follows:

> *It is an objective for Fingal County Council to develop a waste transfer facility (65,000 tonnes/annum) at Kilshane Cross (alongside proposed biological treatment waste recycling, and sludge drying) in order to accept municipal waste for onward transfer to energy recovery or disposal facilities*.

It is also noted that a SID development comprising a materials transfer and processing facility to be located Millennium Business Park, Cappagh Road, Dublin 11 has been granted permission by ABP (reference: PL06F.PA0048), in May 2017. The proposal is located approximately 1.5km south-west of the RBSFS site.

The above planning history and context supports the positive consideration of the proposed development at this location, based on the fact that the site (and surrounding area) has been previously considered suitable for waste management purposes.

[10] The full development description provides for: A new two storey hospice building comprising; entrance area with restaurant and chapel, day care area including therapy areas, outpatient area, homecare department, day care administration, paramedical department, 24 bed in-patient unit, mortuary, laundry, services area, bereavement/education building, in-patient unit administration area, landscaped gardens, surface car parking, basement level parking, perimeter boundary fence, attenuation pond, additional site works and an access road from Connolly Hospital.

2.2.4 ORBITAL SEWER & OUTFALL PIPELINE CORRIDOR

The linear nature of the proposed development results in the lands on which the scheme will be implemented falling into a variety of land use types and zoning objectives.

Table 2.1 below identifies those planning applications that are of relevance in respect of the pipeline corridor/ route of the orbital sewer and land-based outfall pipeline, in respect of their location relative to the proposed development. As regards these applications, the monitoring and search exercise focussed on planning permissions issued since 2014, as this would indicate extant permissions. The area of focus for these was within a 100m corridor (50m on both sides) of the proposed pipeline route.

Further detail on the above, is also provided within the CPO Planning Report that accompanies the concurrent CPO made to ABP.

Reg. Reference	Development Description	Status
Pre-SID App: PL29S.PC0203	Expansion and upgrading of the existing Ringsend Waste Water Treatment Plant	Confirmed SID: 21/03/2018
Pre-SID App: PL06F.PC0250	Proposed continuance of use on a permanent basis of the 8,840 space long-term car park on a site at Harristown and the 2,040 space long-term car park at Stockhole	Confirmed SID: 11/04/2018
SID App: PL29S.PA0043	Health Infrastructure Development comprising National Paediatric Hospital, Innovation Centre and Family Accommodation Unit at St James' Hospital Campus, Satellite Centres at Tallaght and Connolly	Granted: 26/04/2016
SID App: PL06F.VA0014	Dublin North Fringe 220kV Reinforcement Project	Granted: 12/02/2013
SID App: 06F. VM0011	Amendment to decision on Electricity Development	Amendment Granted: 22/01/2016
Section 175. ABP: PL06F.EL.2045	Fingal County Council - Kilshane Cross Recycling Park, Kilshane Cross, Dublin 15	Granted: 2006
SID App: PL06F.PA0048	A materials transfer and processing facility of up to 170,000 tonnes per annum capacity, at Millennium Business Park,	Granted: 25/05/2017
FCC: FW17A/0083 (Blanchardstown Regional Drainage Scheme (BRDS)) ABP: PL06F.248959	For development in the Tolka River Valley Park in the townlands of Parslickstown, Buzzardstown, Coolmine, Corduff and Deanstown in Mulhuddart and Blanchardstown, Dublin 15. The development will consist of: a new sewer duplication of the existing 9C sewer for a distance of ca. 3.2 km with associated permanent manhole covers along its length; three cross-connections between the existing 9C Sewer and the proposed 9C sewer duplication (adjoining Parlickstown Road, Church Road and between Snugborough Road and Mill Road); underground storage tanks with a combined storage capacity of ca. 30,000m3, with associated manhole covers at ground level; a single storey control building (ca. 240 sq m) over an underground waste water pumping station (ca. 271 sq m) located in a ca. 1,030 sq m compound with surrounding boundary fence; the storage tanks, control building and pumping station will be located in the park near Mill Road; 5 no. vehicular accesses associated with construction - 4 no. temporary vehicular accesses (off Parlickstown Road, Church Road, Old Navan Road and Blanchardstown Road North) and one permanent vehicular access off Waterville Distributor Road; 11 no. vent stacks ca. 7.6m high (one each adjoining Parlickstown Road, Church Road, Blanchardstown Road North, Snugsborough Road and the proposed pumping station (this vent stack is 5.2 m high), and 6 no. over the underground tanks); 3 no. electrical kiosks (adjoining Parlickstown Road, Church Road and at the pumping station site; Diversion of the existing 9C Sewer and an existing watermain to facilitate construction of the storage tanks; Diversion of 2 underground ESB lines and an overhead ESB line to facilitate the pumping station; 1 no emergency stormwater overflow to the River Tolka near Mill Road. The sewer will be substantially constructed	Grant Date: 24-Aug-2017

Reg. Reference	Development Description	Status
	by a bored tunnel. The following temporary works associated with the construction are proposed: 13 no. working areas (5 no. between Parlickstown Road and Church Road, 2 no. between Church Road and Blanchardstown Road North, 4 no. between Blanchardstown Road North and Snugborough Road and 2 no. between Snugborough Road and Mill Road); 7 no. haul roads (3 no. between Parlickstown Road and Church Road, 1 no. off the Old Navan Road, 2 no. between Blanchardstown Road North and Snugborough Road and 1 no. between Snugborough Road and Mill Road); 2 no. temporary culverts of the River Tolka adjoining Parlickstown Road and north east of the public car on the Old Navan Road; 1 no. temporary culvert of the River Pinkeen adjoining Church Road; 1 no. temporary bridge and 1 no. temporary extension of an existing culvert, both north east of the public car on the Old Navan Road. An Environmental Impact State (EIS) will be submitted to the Planning Authority with the planning application.	
FCC: FW16A/0081	Permission for the construction of a 225mm foul sewer (c. 400m) on a .32 ha at Coldwinters to connect into the foul sewer previously permitted unfer FW13A/0089. This sewer shall facilitate the connection of both residential and commercial properties to the public sewerage scheme.	Grant Date: 29-Aug-2016
FCC: FW16A/0062	Permission for building housing offices and an adjoining service warehouse, a hard surface area, staff, visitor and truck parking areas, an empty skip storage area and a designated waste processing area comprising the following elements; a weighbridge installation, truck washing facilities, a one-way haul route, metal recovery shears plant and material stockpiles. Associated development works include connection to services and utilities (gas, water, mains, sewer, stormwater and electricity), the development of a boundary screen around the waste processing area (8m high) the development of a boundary wall and fence around the whole site (2.2m high) and the development of landscaping around the perimeter of the whole site. A Waste Facility Permit will be obtained for site activities as they will fall under the scope of the Waste Management (Facility Permit and Registration) Regulations SI 821 of 2007 and SI 86 of 2008. An Environmental Impact Statement has been prepared pertaining to the proposed development.	Refuse Permission: 20-Jun-2016
FCC: FW16A/0022	The development will consist of the construction of 2 no. 3 & 4 storey apartment blocks on Phoenix Park Avenue (in Zone 13) containing 25 no. 2-bed apartments with solar panels, vehicular access road off Phoenix Park Way to basement car park for 43 no. car space, enabling works for future basement extension and associated external works.	Grant Date: 16-May-2016
FCC: FW15A/0165	Provision of new 260 sq.m. single storey extension to existing X-Ray Department including a 102 sq.m. single storey louvered plant room on roof; to accommodate staff change, rest, on-call and administration facilities together with all associated works.	Grant Date: 22-Mar-2016
FCC: FW15A/0159	Permission for provision of new 130 sqm single storey extension to existing X-Ray department as granted (Planning Ref FW13A/0121).	Grant Date: 14-Mar-2016
FCC: FW15A/0060	The development will consist of the following: 1 no. single storey temporary accommodation structure connected to an existing temporary building, consisting of 4 no. classrooms, 1 no. office, circulation and a toilet block measuring 387 sq.m. Works will also include the conversion and extension of an existing toilet block into a link corridor connecting all associated buildings together. 1 no. single storey detached temporary male and female changing rooms all connected to existing storm and foul sewer and all associated site works.	Grant Date: 15-Sep-2015
FCC: FW14A/0153	The attachment of 6 no. antenna and 2 no. transmission dishes on the roof-top Connolly Hospital. Mill Rd, Blanchardstown, Dublin 15. The proposed development also included equipment cabinets and associated works and development at roof level.	Grant Date: 16-Mar-2015
FCC: FW14A/0135	A new National Velodrome and Badminton Centre and associated works	Grant Date: 13-Apr-2015
FCC: FW14A/0024	Retention permission for single storey 162 sq.m building to front of existing school building for use as general-purpose room and for	Grant Date: 19-May-2014

Reg. Reference	Development Description	Status
	extension of current temporary permission for single storey temporary accommodation structure to side of school building	
FCC: FW13A/0089	Planning permission for 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 on a 2.38 hectares site within Roadstone Wood's Huntstown Quarry, Huntstown, North Road, Finglas, Dublin 11.	Grant Date: 12-Nov-2013
FCC: FW13A/0021	Permission for the development of the construction of a new single storey extension of 120.5m2 to the existing X-RAY Department to form part of a new MRI Examination Suite. The development will include a new associated outdoor plant enclosure of 22.5m2 at ground level and associated roof plant equipment and site works.	Grant date: 04-Jun-2013
FCC: FW11A/0033	The construction of a new waste recovery facility (total area 1393 sqm), including ancillary internal offices, open yard, staff car parking and associated site development works	Grants Date: 19-Aug-2011
FCC: F17A/0593	Retention of use for existing classrooms and permission for conversion of existing office and laboratory space to classrooms in existing Protected Structure and all associated site and ancillary works.	Grant Date: 10-Jan-2018
FCC: F17A/0412	Amendments to previously approved residential development Reg. Ref. F14A/0132 (ABP Ref. PL06F.244401) comprising revisions to permitted 'C' Type houses (30 no.) & C1 Type houses (34 no.). The proposed amendments to the internal layouts include the provision of bedroom accommodation at second floor level and additional living accommodation at first floor level resulting in an increased gross floor area of 41.1m² for the 'C' Type and 41.1m² for the 'C1' Type. Both house types are to remain as 3 bedroom units. Permission is also sought for all associated elevational changes to each house type. All the above on site measuring approximately 11.9 Hectares.	Grant Date: 11-Oct-2017
FCC: F17A/0244	Permission for the installation of 1 no. ecolation unit, associated internal alterations and plant area within the existing crematorium building (permitted under Reg. Ref: F14A/0216). The proposal also seeks permission for the retention and completion of the car park adjacent to the crematorium to provide 95 no. car parking spaces, 11 no. car parking spaces adjacent to the substation and lodge, 24 no. car parking spaces at the Entrance Plaza together with associated landscaping, upgrade of internal road network, traffic management measures including electronic barrier and site works.	19-Dec-2017
FCC: F17A/0026 ABP: PL06F.249397	The construction of a new 2 storey 4 bedroom detached dwelling (213sqm) including new shared parking courtyard and new shared driveway off existing laneway and associated site works.	Refuse Permission: 07-Feb-2018
FCC: F16A/0464 ABP: PL06F.248515	A 10 year permission for development on a site of 6.5ha. (16.06 acres), for the demolition of a 2 storey twentieth century extension (52m²) to the rear of Kinsaley House, 2 storey apartment building (412m²) and related agricultural buildings (2 no. sheds, 2 no. stable blocks and a hay shed totalling 1,038.50m²), and development comprising [1] refurbishment of Kinsaley House consisting of fabric repairs, basement works and provision of a first floor en-suite bathroom; and provision of a 2 storey extension to the rear of Kinsaley House consisting of kitchen, dining and living space, Part M accessible WC and entrance lobby to ground floor (65.4m²) and main bathroom to first floor (12.4m²) [2] construction of 101 no. dwellings consisting of 8 no. 2 storey 2 bed houses, 62 no. 2 storey 3 bed houses, 30 no. 2 storey 4 bed houses, and the renovation of the existing retained stone shed consisting of fabric repairs, addition of a first floor (total area 87m²), new openings within the existing east and west elevations for provision of windows and access door and new slate roof incorporating conservation type roof lights for use as a 2 bed residential dwelling, and associated in-curtilage parking spaces to all dwellings [3] vehicular access off Chapel Road [4] a 180 sq.m. childcare facility with an outdoor play area and associated staff parking and drop off/pick up spaces [5] 1.6ha. public open space, and [6] ancillary site development works including internal roads, landscape works, boundary treatments,	Grant Date: 25-Oct-2017

Reg. Reference	Development Description	Status
	children's play facility, foul, surface water (including SuDS treatment) and water supply works, undergrounding of the existing 10KV overhead power line and 2 new on-site pylons, provision of 1 no. ESB sub station and a temporary construction access route off Chapel Road. This application relates to a Protected Structure and its curtilage .Additional Information lodged 14/03/2017 Deemed Significant Revised Public Notices lodged 27/03/2017	
FCC: F16A/0397 ABP: PL06F.247665	The proposed development is comprised of three 5-storey office blocks, which will provide a total of 23,970 sq.m. of office floorspace, together with undercroft areas providing a further 5,048 sq.m. of space comprising parking, services and storage space for each building. The total gross floor area of the buildings is 29,018 sq.m. The site occupies an area of 4.98 ha. and is located west of Stockhole Lane, north of the R139 Clonshaugh Road and east of the M1 motorway. Block 1 will have a maximum height of 23.19m above ground level and will provide 7,404sq.m. of office floorspace, together with car and bicycle parking, shower facilities, bin storage facilities and plant service areas at an undercroft parking level; Block 2 will have a maximum height of 23.31m above ground level and will provide 8,283sq.m. of office floorspace, together with car and bicycle parking, bin storage facilities and plant service areas in an undercroft parking level; Block 3 will have a maximum height of 23.31m above ground level and will provide 8,283 sq.m. of office floorspace, together with car and bicycle parking, bin storage facilities and plant service areas in an undercroft parking level. Blocks 2 and 3 will comprise a combined floorspace at basement level, accessible via a common vehicular entrance and providing common bicycle storage and shower facilities. All 3 buildings are also provided with plant enclosures at roof level. At ground floor level and above ground levels all buildings will provide open plan office space, with centrally located core areas which provide toilet facilities, lift shafts and stair cores. A total of 474 parking spaces will be provided at surface level and in undercroft areas. The proposal also includes the provision of an access road, linking to the existing road from the Stockhole Lane roundabout; alterations to the roundabout junction of the R139 and Stockhole Lane, to facilitate the provision of a left through lane on the northern side of the R139; foul and surface water drainage; hard and soft landscaping including a water feature in the centre of the site; 3 No. electricity substations and all other site services and infrastructure. The planning application also includes the submission of a Masterplan. An Environmental Impact Statement (EIS) will be submitted to the Planning Authority with the planning application and the EIS will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority.	Refuse Permission: 19-May-2017
FCC: F16A/0374	Amendments to previously approved residential development Reg. Ref. F14A/0132 and F14A/0316, comprising the omission of the approved roundabout and the provision of a signalised junction arrangement at the main entrance to the development off Drumnigh Road. The amendment includes all associated revisions to the adjacent open space and to the existing entrance to the Trinity Gaels GAA club. Permission is also sought for a new entrance treatment to the residential development.	Grant Date: 21-Feb-2017
FCC: F15A/0141	Aviation fuel pipeline from Dublin Port to Dublin Airport. The proposed development is in Fingal County Council and Dublin City Council administrative areas. In the Fingal County Council administrative area the route of the pipeline is from the junction of the R139 (formerly N32) and the Clonshaugh Road via the Clonshaugh Rd. to AUL/FAI sports ground, adjacent to the north boundary of AUL/FAI sports ground, under the M1 motorway and via the DAA Long Term Red Carpark, adjacent to Eastlands Car Hire Compound, ALSAA complex, under the Swords Road R132 and via the Corballis Road to a reception station at the existing Fuel Storage Facility, Corballis Road, Dublin Airport. (In Dublin City Council Area the route of the pipeline is from proposed inlet station at Team CV Ltd., Bond	Grant Date: 07-Jul-2015

Reg. Reference	Development Description	Status
	Drive, Dublin Port, Dublin 1 and via Bond Drive, Tolka Quay Road, East Wall Road, under the Tolka River, Alfie Byrne Road, Clontarf Road, Howth Road, Copeland Avenue, Malahide Road (R107) and R139 (formerly N32). A separate application is being lodged concurrently with Dublin City Council in respect of the development proposed in its admininstrative area). The development will consist of (a) single storey Control Building, ancillary pipework in bunded reception station at the existing Fuel Storage Facility, Corballis Road, Dublin Airport, Co. Dublin (b) 200mm diameter continuously welded steel pipeline, laid generally in the public road, at a depth of circa 1.2m. below surface level except where it will pass under the Mayne River, Cuckoo Stream on Clonshaugh Rd., under the M1 and under the junction of Corballis Road with the Old Swords Rd. (R132). Length of the pipeline in Fingal County Council administrative area will be circa 3.0 km (total length will be 14.4 km). An Environmental Impact Statement and Natura Impact Statement have been prepared in respect of the application and will be submitted with the planning application.	
FCC: F14A/0316	Amendments to planning permission granted under Ref. Ref. F07A/0424 (ABP Ref. PL 06F.226731), as extended in duration under FCC Ref. F07A/0424/E1. Permission is sought to extend the boundary of the permitted development to incorporate additional units on the western boundary and to facilitate the coherent and rationalised design and layout of all proposed committed and permitted Class 1 Open Space on the southern part of the site for active and passive recreational uses. the development area is extended from 11.9 ha to 12.75 ha. The proposed amendments comprise the replacement of 28 no. two storey units on the front part (western part) of the site with 48 no. two and three storey dwellings (House No's 1-48) on part of the extended site area, and amendments to the location and garden layouts of 20 no. permitted dwellings (House No's 49-68), resulting in an increase in the total number of dwellings from 208 no. (as permitted under Reg. Ref F07A/0424/E1) to 228 dwellings. The proposed amendments also seek to amend the permitted mix of dwelling types to provide 40 no. 3 bed dwellings; 174 no. 4 bed dwellings and 14 no. 5 bed dwellings. Amendments are also proposed to the drainage and site services layout to cater for the additional units proposed.	Grant Date: 23-Dec-2014
FCC: F14A/0216	Construction of a new crematorium	Grant Date: 16-Dec-2014
FCC: F14A/0132 ABP: PL06F.244401	Construction of 270 no. dwelling houses together with car parking spaces and all associated works and landscaping.	Grant date: 18/06/2015
FCC: F13A/0007 ABP: PL06F.241803	3 year extension of temporary permission for continuance of use of concrete recycling facility at St. Anne's Dardistown, Ballymun, Co. Dublin	Refused: 26/07/2013
FCC: F17A/0027 ABP: PL06F.248315	Construction of house including new shared parking courtyard and new shared driveway off existing laneway and all associated site works.	Refused: 13/07/2017
FCC: FW15A/0118	Retention planning permission (Planning Ref.F08A/0450) of an existing development at this site. The development consists of an existing 24 metre high telecommunications support structure, antennas, equipment container and associated equipment within a fenced compound. The development forms part of Vodafone Ireland Limited's existing GSM and 3G Broadband telecommunications network.	App withdrawn as no Additional Information recorded in 6 months
FCC: F15A/0606	New access off St. Margaret's Road (R122) to the south of the current Dublin Airport Logistics Park including a new junction, a 270m access road, a permanent site boundary and all necessary services, on a site comprising 1.56 ha.	Grant Date: 31-Mar-2016

Table 2.1 Summary History of Planning Applications within the Pipeline Route/ Corridor

Conclusion

Following the planning history and associated planning applications review, it appears that the subject proposed Project sites, and those lands in the vicinity of the proposed Project, are not subject to any planning applications which would preclude the granting of permission for the proposed Project.

3. PLANNING AND DEVELOPMENT POLICY

3.1 INTRODUCTION

As can be seen from the aforementioned and below, EU, national, regional and local policy and planning documents have all clearly identified the need for additional and alternative wastewater treatment within the Greater Dublin Area. The proposed Project also demonstrates compliance with national, regional and local planning policies, as are identified and highlighted below.

3.2 EU AND NATIONAL POLICY CONTEXT

3.2.1 EU POLICY FRAMEWORK

Marine Strategy Directive

Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), was formally adopted by the European Union in June 2008. It established a legal framework for the development of marine strategies designed to achieve good environmental status in the marine environment by the year 2020. The Marine Strategy Framework Directive was transposed into Irish law on 31 May 2011 with the S.I. No. 249/2011 - EC (Marine Strategy Framework) Regulations.

Water Framework Directive

The delivery of water and wastewater 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 wastewater 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.

Project Response:

The development of the proposed Project will facilitate the upgrade of the Ringsend WwTP, and a number of other WwTPs within the GDA as the expansion of these existing plants beyond their ultimate capacity is also limited by site constraints and receiving water constraints. This would therefore assist in ensuring that Ireland is increasingly more compliant with the WFD through the high standard of treatment proposed and subsequent high quality of water proposed to be discharged from the system.

3.2.2 RIVER BASIN MANAGEMENT PLAN FOR IRELAND, 2018-2021

In Ireland, the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. 684 of 2007) gives effect to the requirements of the Urban Waste Water Treatment Directive (Directive 91/271/EEC) and the Water Framework Directive (2000/60/EC). The Urban

Waste Water Treatment Directive (UWWTD) lays down the requirements for the collection, treatment and discharge of urban waste-water and specifies the quality standards which must be met before treated waste-water is released into the environment.

The recently published (April 2018) River Basin Management Plan for Ireland, 2018-2021 (RBMP) sets out a range of measures aimed at moving towards achievement of the WFD objectives.

As identified in the RBMP "*the priority objective for this river basin planning cycle is to secure compliance with the Urban Waste Water Treatment Directive and to contribute to the improvement and protection of waters in keeping with the water-quality objectives established by this Plan. Achieving this objective entails addressing waste-water discharges and overflows where protected areas (i.e. designated bathing waters, shellfish waters and Freshwater Pearl-Mussel sites) or high-status waters are at risk from urban waste-water pressures. Overall, in Irish Water's investment plans, capital expenditure has been committed for 255 wastewater treatment-plant upgrades".*

Within the above context, Appendix 1 of the RBMP identifies the urban areas where capital works are proposed by Irish Water in order to upgrade water treatment plants. Within Appendix 1, Table 1 (Upgrades being undertaken to support compliance with the requirements of the Urban Waste Water Treatment Directive), and Table 2 (Upgrades being undertaken to support compliance with the requirements of Protected Areas) both include Ringsend (generated load 2016 PE = 2.225.120). Section 7.2.1 notes further that "*of the urban areas where works are required, the majority will be compliant by the end of 2021, including Ringsend, which is the single largest waste-water treatment plant in the country, accounting for some 41% of the total waste-water load*".

In addition to the above, section 7.2.2 identifies the fact that "*Capital investment in waste-water treatment and collection systems, together with optimal operation of these assets, is necessary to ensure compliance with the Urban Waste Water Treatment Directive and to meet environmental objectives"*.

At present there are no standards for the discharge of treated effluent to the open sea apart from the emission standards contained in the Urban Wastewater (UWWT) Regulations. The exact location of the discharge lies within 'coastal' waters as defined by the WFD. Within this context, the EU Surface Water Regulations[11] are applicable in respect of the water quality standards that are required to achieve the environmental objectives established for surface waterbodies by the WFD. As is highlighted within Chapter 8 (Marine Water Quality) of the EIAR, "*the WFD takes a holistic approach to water resources management. The key objective of the WFD is to protect and improve the quality of rivers, lakes, transitional and coastal waters and groundwater…and Wastewater Discharge Authorisations must set standards (emission limits) that will contribute to the receiving waters complying with the standards for environmental quality laid out in these regulations*". The water quality standards proposed for transitional and coastal waters are listed in Table 8.1 of Chapter 8 of the EIAR.

***Project Response*:**
As has already been highlighted, the proposed Project is required to augment the

[11] The European Union Environmental Objectives (Surface Waters)(Amendment) Regulations 2015

Ringsend WwTP and a number of other WwTPs within the GDA, as the expansion of these existing plants beyond their ultimate capacity is also limited by site constraints and receiving water constraints. The proposed Project therefore represents the commitment on Irish Water's part, as stated within the Irish Water Business Plan (see below), to provide the necessary critical waste water treatment infrastructure.

The proposed Project thus implements the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS) Final Strategy and the SEA of the GDSDS, and will assist in ensuring that Ireland is increasingly more compliant with the WFD and UWWT Regulations, through the high standard of treatment proposed and subsequent high quality of water proposed to be discharged from the system.

3.2.3 NATIONAL PLANNING FRAMEWORK

The National Planning Framework (NPF) is the government's strategic planning document aimed at catering for an approximate additional one million people living in Ireland in the future. It therefore sets out the likely future change scenario, and the spatial pattern required to best accommodate and support the envisaged change. It will also strongly inform future strategic national investment, including in infrastructure. It is intended that the NPF will be supported through robust tiered regional and local level plans. As such, the NPF establishes the overall framework for lower-order plans and strategies.

As regards water and wastewater services and infrastructure, the NPF identifies that there is an acknowledged need to upgrade Ireland's water and wastewater systems. It also identifies a number of key growth enablers for Dublin, with the following being of specific pertinence to the proposed Project:

> *Ensuring that water supply and wastewater needs are met by new national projects to enhance Dublin's water supply and increase waste water treatment capacity.*

In terms of the National Strategic Outcomes for consideration in developing the National Investment Plan that will support the NPF (Ireland 2040), in respect of the sustainable management of water and other environmental resources, the framework provides explicit support for the proposed Project through the following statement:

> *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.*

As regards the effective management of waste (page 149), it is highlighted that:

> *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.

- Biological treatment and increased uptake in anaerobic digestion with safe outlets for bio-stabilised residual waste…

Project Response:
The implementation of the proposed Project is in line with the policy objectives of this national planning policy document, and will serve the Dublin Gateway. It will thus facilitate and support its growth as a strategic centre, and will limit the environmental risk posed by the lack of existing capacity within existing wastewater treatment plants and associate infrastructure.

It will also assist Ireland in meeting its obligations under the Urban Wastewater Directive (91/271/EEC) and the Water Framework Directive (WFD) (91/271/EEC), the Sewage Sludge Directive (86/278/EEC), the Nitrates Directive, the Waste Framework Directive (2008/98/EC), and the Wastewater Discharge (Authorisation) Regulations 2007). In addition, it represents the provision of key growth enabling infrastructure for one of the Country's primary development centres, and support the sustainability and quality of life for those living within the wider hinterland.

3.2.4 NATIONAL DEVELOPMENT PLAN 2018-2027

The National Development Plan (NDP) outlines investment priorities that will support the National Planning Framework (NPF) to be implemented in a successful manner. It will guide planning and investment decisions at a national, regional and local level within Ireland over a period of two decades in order to accommodate an expected increase in population of over 1 million people. The NDP reveals the Government's commitment to fulfilling Ireland's infrastructure and investment requirements over the next ten years, through a total estimated investment of €116 billion.

The NDP identifies National Strategic Outcomes of the NPF, one of which includes the "*Sustainable Management of Water Waste and other Environmental Resources*". In addition to this, the NDP provides a number of corresponding Strategic Investment Priorities, including one for *Water Infrastructure*, which supports the fulfilment of the identified National Strategic Outcomes.

A number of Major National Infrastructure Projects have also been included within the NDP for appraisal and delivery. The Greater Dublin Drainage Project is one such major infrastructure project recognised under *Sustainable Management of Water and other Environmental Resources*.

Under "*Waste Management and Resource Efficiency"* (National Strategic Objective 9, page 85), it is stated that "*Investment in waste management infrastructure is critical to our environment and economic well-being for a growing population and to achieving circular economy and climate objectives".*

Project Response:
The proposed Project, including the RBSF component, is consistent with the provisions and strategic objectives of the NDP.

3.2.5 INFRASTRUCTURE AND CAPITAL INVESTMENT 2016-2021

The Government's framework for infrastructure investment highlights the fact that investment in infrastructure "*such as transport and communication networks, energy and*

water, is an important enabler of economic growth." It aims to facilitate economic growth and recovery throughout the country through a number of large projects and several smaller projects.

> *"Irish Water plans to invest €4 billion over the period 2016-2021. This very significant level of investment is targeted at addressing the major deficits in drinking water quality and capacity, wastewater quality and capacity, and repairing much of the infrastructure that is in most need of investment, including removing lead piping from the public network."*

The Capital Plan was published in 2015, and reviewed in 2016 following significant contextual and fiscal change, with the review providing "*an opportunity to undertake an evidence-based assessment of infrastructural priorities against the backdrop of a changed economic and fiscal environment*". Within this context, water services investment is identified as a key focus of the Public Capital Programme, and "*Substantial investment is currently planned for Ireland's water infrastructure for the period out to 2021 seeking to strike a balance between the demand for water infrastructure investment and constraints such as affordability, planning requirements and supply chain issues*."

Following a review of the 2018 Estimates, and the allocation of funding, the Government is expected to publish a new 10 Year National Investment Plan (NIP) for the period 2018-2027 before the end of 2018. This NIP will form a close alignment to the NPF, which will provide the framework for future development and investment in Ireland.

Project Response:
The proposed Project is a direct realisation of one of the main projects identified as a strategic specific project within the NPF and NDP, and as such, is part of the planned and co-ordinated approach to Irish Water's water services investment as provided for within its Public Capital Programme. The proposed Project is considered to be in accordance with the provisions and objectives of the Capital Investment Plan. Implementation of the proposed GDD Project will assist in ensuring that existing major deficits in wastewater quality and capacity are addressed and will also provide for future sustainable growth and development.

3.2.6 WATER SERVICES STRATEGIC PLAN (2014-2021) – A PLAN FOR THE FUTURE OF WATER SERVICES (WSSP)

Wastewater must be collected and treated before it is returned to the environment. The most recent EPA assessment of urban wastewater[12] identifies that wastewater treatment is not at the required standard in 38 of our urban areas and that 44 areas (including areas within the GDA) discharge raw sewage. The Irish Water '*Water Services Strategic Plan*' (WSSP) acknowledges that substantial improvements to water supply capacity, quality and reliability are required in addition to upgrading of our wastewater infrastructure, both treatment plants and collection networks, in order to protect the environment. This will require significant capital investment over many years.

The WSSP also identifies the importance of effective wastewater management in delivering a safe and reliable water supply, enabling social and economic growth and enhancing and protecting the environment as follows: "*The treatment of wastewater to*

[12] *Urban Waste Water Treatment in 2016, EPA, 2016*

appropriate standards prior to its discharge to watercourses safeguards water used for drinking water abstraction, bathing, fishing and other recreational uses" – and the fact that existing zoned areas for development are constrained by system capacity limitations.

The Water Services (No. 2) Act, 2013 provides for Ministerial Direction on the form and content of the WSSP, with one of the six strategic objectives set out by the Minister being that the Plan address the objective to "*Provide Effective Management of Wastewater*". Chapter 5 of the WSSP specifically addresses this by outlining the current situation as well as some of the key challenges which are required to be faced. The chapter also outlines a number of objectives and strategies aimed at assisting to achieve the overall strategic objective, and provides a number of indicators and targets through which this can be measured.

Project Response:
Whilst a current proposed extension to the Ringsend facility will ensure that the Ringsend facility remains within its licence limits, the ability of this facility to continue doing so post 2025 is not calculated to be possible without the implementation of the proposed GDD Project. Implementation of the proposed Project will allow Ringsend to remain within its licence limits out to 2050. The proposed Project is therefore in compliance with the strategic objectives of the WSSP, and will facilitate WSSP objectives in relation to:
- managing the availability and reliance of wastewater services now and into the future (Objective WW2b);
- managing the operation of wastewater facilities in a manner that protects environmental quality (Objectives WW1c and WW1d);
- provides much needed headroom capacity; and
- facilitates growth in line with national and regional economic and spatial planning policy.

3.2.7 IRISH WATER BUSINESS PLAN - TRANSFORMING WATER SERVICES IN IRELAND TO 2021

This 7-year plan details the current status of the Irish water industry and the need for improvements to existing infrastructure and outlines nine key deliverables which include "*investing €5.5bn to bring our water infrastructure and services to an acceptable level".* The plan also *s*pecifically notes that in respect of existing wastewater capacity, the Greater Dublin Area depends on one large treatment plant at Ringsend which requires both process upgrading and capacity expansion. The Business Plan also states that Irish Water is '*focussed on delivering critical infrastructure necessary to support social and economic development for the country…To achieve these objectives Irish Water will assess the demands for water and wastewater services based on national and regional spatial policies and plans, together with population and economic growth predictions*'.

Project Response:
As is highlighted within the EIAR (Chapter 3 Need for the proposed Project), although there are currently plans to upgrade and extend the Ringsend WwTP capacity, the projected treatment capacity requirements for the medium to long-term within the GDA will notwithstanding, exceed the ultimate capacity of existing WwT plants (including Ringsend) after 2025. The expansion of existing plants beyond ultimate capacity is also limited by site constraints and receiving water constraints. The proposed Project therefore

represents the commitment on Irish Water's part, as stated within the Irish Water Business Plan, to provide the necessary critical waste water treatment infrastructure.

3.2.8 NATIONAL WASTEWATER SLUDGE MANAGEMENT PLAN (2016)

The National Wastewater Sludge Management Plan (NWSMP) outlines Irish Water's strategy to ensure a nationwide, standardised approach for managing wastewater sludge over the next 25 years. A national approach will ensure that, for the first time, treated wastewater sludge across the country is effectively managed, stored, transported and disposed of, or re-used in a sustainable way, to the benefit of the public and the environment.

The NWSMP makes the point that the "*use of Sludge Hub Centres backed by Satellite Dewatering Sites allows for economies of scale and greater flexibility in the selection of sludge treatment processes, particularly energy recovery. Quality control over the outputs from any sludge treatment process is also improved using this system".* It also highlights the fact that this system is commonly used internationally.

Key actions proposed within the NWSMP include the provision that the location of hubs will be considered on a regional rather than county basis and will maximise the use of energy recovery where possible, and that "*the preferred option for re-use of treated wastewater sludge (biosolids) is reuse on land. Non-food tillage crops will be the primary focus for agricultural reuse of biosolids*".

The NWSMP provides a summary of the current Sludge Hub Centres status. Within this, it is clear that the proposal in relation to Fingal involved the development of a sludge hub as part of the GDD WwTP. This is reflected within Table 3.3 (Summary of the Recommended Hub Centres and Satellites in County Sludge Management Plans), and reiterated in Sections 7.4.9 and 9.7 (Selection of Sludge Hub Centres) of the NWSMP. Sections 9.5 – 9.7 outline the considerations and criteria that are relevant in respect of the location of new or upgraded sludge facilities.

In respect of biosolids, the NWSMP notes that *"Where treated wastewater sludge storage is required to manage biosolids prior to landspreading, it may be accommodated by the hub centre or separately. The scale and location of such storage will be assessed on a regional basis".*

Project Response:
The proposed Project is compliant with the provisions and objectives of the NWSMP, in that the proposed sludge hub centre will be co-located on the same site as the proposed WwTP, and the proposed RBSF, proposed on a separate site, also within the Fingal County Council administrative area, has been appropriately assessed on a regional basis.

The considerations and criteria outlined within Sections 9.5 – 9.7 of the NWSMP, have been incorporated into the design considerations and project proposal, where appropriate, and the proposals in respect to the re-use of biosolids are in line with the associated NWSMP key action.

As is also highlighted within Chapter 4 of the EIAR, the project will also provide sustainable treatment with the bio-gas produced during the treatment process of the

wastewater sludge and domestic septage being utilised as an energy source, on site.

Whilst the proposed Project does not include for thermal drying of the sludge, this is in line with the provisions of the NWSMP. As is also highlighted within Chapter 4 of the EIAR, the proposed Project also proposes the thermal hydrolysis and anaerobic digestion in the treatment of the sludge and using the bio-gas produced from this process to fuel onsite Combined Heat and Power (CHP) generators to produce electrical and thermal energy. This is a sustainable treatment of bio-gas produced through the treatment process of the wastewater sludge and domestic septage, which is thus being utilised as an energy source, on site, and is in accordance with a number of Fingal County Development Plan objectives relating to sustainable energy as is highlighted further within this Planning Report.

3.3 REGIONAL POLICY CONTEXT

3.3.1 REGIONAL PLANNING GUIDELINES FOR THE GREATER DUBLIN AREA 2010-2022

The Regional Planning Guidelines (RPG) set out the planned direction for growth within the Greater Dublin Area up to 2022 by giving regional effect to national planning policy under the National Spatial Strategy (NSS).

The Regional Strategy Vision is that the GDA by 2022 is an economically vibrant, active and sustainable international Gateway Region, with strong connectivity across the GDA Region, nationally and worldwide; a region which fosters communities living in attractive, accessible places well supported by community infrastructure and enjoying high quality leisure facilities; and promotes and protects across the GDA green corridors, active agricultural lands and protected natural areas.

Section 6.5 of the RPG identifies the need for new wastewater treatment facilities to serve the GDA and that failure to implement key wastewater infrastructure will limit the implementation / delivery of the GDA policies and objectives and by consequence the NSS. Table 11 in this section of the Guidelines outlines a number of Critical Strategic Projects as water treatment investment priorities. Number two on this list is the "*identification of a suitable site for the new Greater Dublin Regional Drainage Project – Regional Waste Water Treatment Plant, Marine Outfall and Orbital Drainage System and development of plant and network connection".*

With regard to the future settlement strategy in the GDA, **SR5** of the Guidelines states that; *"the expansion and growth of towns in the GDA is predicated on the delivery of suitable and necessary infrastructure. Local Area and Development Plans need to take into account the current and future infrastructure needs of zoned lands and ensure that future development is only permitted where necessary water services have been provided to avoid causing a risk to the environment and is in accordance with existing and future discharge licences for waste water facilities"*.

The importance of the GDA to the national economy is acknowledged in the Economic Development Strategy (Chapter 3). The continued economic success of the GDA is identified as being critical for a return to national growth. The RPGs further identify that

economic infrastructures, including adequately zoned and serviced lands, are essential for enterprise development and the attraction of investment. Strategic Economic Recommendation ER16 (**SER16)** is to, *"seek proactively, the delivery of new sustainable water supply, waste water treatment and waste management infrastructure, without which the future development of the GDA will be impossible".*

Additional investment in new wastewater treatment facilities is highlighted as an immediate and pressing need in light of capacity issues with the existing network and facilities. The RPGs confirms that *"it is vitally important that solutions are found to meet the medium and long term needs for water supply and treatment for the next decades in the GDA and to allow for consolidation of the built up areas in line with sustainable development objectives"*. Failure to deliver such infrastructure will severely curtail the implementation of the RPGs. The following strategic policies are of relevance in this regard:

> ***PIP3*** *- Protect and work to improve water quality in, and impacted by, the GDA and seek that investment in waste 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.*
>
> ***PIR16*** *– Ensure that future capacity is provided in growth towns through expansion and upgrading of facilities where necessary and/ or exploration of alternatives such as connecting to adjoining drainage systems or changes to catchments to enable growth towns to provide for the population growth envisaged in the settlement strategy and thus enable a more sustainable settlement pattern to be supported.*
>
> ***PIR17*** *- Identification and development of a suitable site for the Greater Dublin Regional Drainage Project – Regional Waste Water Treatment, Marine Outfall and Orbital Drainage System in the north coast of the GDA, to enable the continued population and economic growth and physical consolidation of the metropolitan area, by reducing the catchment size for Ringsend and providing new treatment capacity through network connections.*

The Guidelines also identify a number of relevant water treatment investment priorities, including;

- Identification of a suitable site for the new Greater Dublin Regional Drainage Project Regional Waste Water Treatment Plant, Marine Outfall and Orbital Drainage System and the development of plant and network connections.

Project Response:
The proposed Project is fully in accordance with the RPG GDA as the proposed Project represents an integrated wastewater management approach, which has undergone rigorous assessment and stakeholder engagement, and which will augment the Ringsend Wastewater Treatment Plant. As such, It implements the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS) Final Strategy and the SEA of the GDSDS Its implementation will ensure the protection, enhancement and maintenance of water quality and the natural environment, and will provide for improved environmental and infrastructural benefits for a significant proportion of the existing and future GDA communities and population. This is in line with sustainable development and the need to consolidate built up areas.

3.3.2 EASTERN–MIDLANDS REGION WASTE MANAGEMENT PLAN (EMRWMP) 2015 – 2021

The Eastern-Midlands Regional Waste Management Plan precedes the publication of the NSWMP. It does however recognise (section 2.3) the NSWMP as a core component of the waste plan, with key objectives of the sludge plan being incorporated into the waste plans. It is also noted that Section 2.2 (Planning Framework) concludes by specifically stating that "*in the event of conflict arising between an objective in the waste plan and that of a city or county development plan, the waste plan objective takes precedence and permission may be granted*[13]*".*

" **Policy A3** sets out to "*Contribute to the improvement of management performance across all waste streams through the implementation of policy actions and monitor progress towards national targets*."

In relation to the management of sludges in the region, **Policy H1** within Section 7.4.7, provides that local authorities will "*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 Directives."*

Project Response:
The Greater Dublin Strategic Drainage Study (GDSDS) in 2005, and its associated Strategic Environmental Assessment (SEA) in 2008, recommended that a new regional wastewater treatment facility be developed in north County Dublin.

The proposed Project was initiated by Fingal County Council in 2011 on behalf of the four Dublin Local Authorities and those in Meath and, Kildare. Fingal brought the GDD through a rigorous alternative sites and routes assessment process and identified a preferred project solution.

The proposed Project thus reflects a co-ordinated and concerted effort by all local authorities and relevant stakeholders to ensure that the necessary infrastructure and measures are in place, as required, and reflected within Policies A3 and H1 identified above.

Section 10A(b)(i) Waste Management Act 1996[14] Aside from a small c.60m corridor *area in DCC*.

3.4 LOCAL POLICY CONTEXT

3.4.1 FINGAL COUNTY DEVELOPMENT PLAN 2017-2023

While the subject development will partly facilitate the wastewater needs of Kildare, Meath and Dublin City, the development is located almost entirely[14] within the administrative area of Fingal County Council. As such, the Fingal County Development Plan 2017-2023 (FCDP) is the key local policy document in the context of this planning application.

Aside from provisions already previously noted within this Planning Report, Section 1.10 (Economic Overview) of the FCDP notes that "*There are a number of key challenges ahead in planning for economic growth across the County and the Plan policies need to respond to the challenges of a changing economy".* Key economic challenges then identified, include water supply and drainage issues, with the Plan further noting that "*Fingal need to work closely with Irish Water to ensure that adequate provision of infrastructure is provided to ensure that wastewater and water services will not be a limiting factor in achieving forecasted growth targets in the future".*

Within the FCDP, Section 7.2 (Water Services), the Statement of Policy provided is to the effect that Fingal County Council will:

> *Liaise and cooperate with Irish Water to ensure the delivery of the proposed Capital Investment Plan 2014 -2016 (or any updated plan) or any other relevant investment works programme of Irish Water that will provide infrastructure to increase capacity to service settlements and to jointly investigate proposals for future upgrades of treatment plants and participate in the provision of a long term solution for waste water treatment for the Greater Dublin Area";*
>
> and
>
> *Facilitate industrial and other forms of development, including residential by ensuring that optimum use is made of existing drainage and wastewater treatment infrastructure in the first instance and that further strengthening of infrastructure is focused on priority locations as identified in the urban settlement hierarchy in accordance with Irish Water, the Regional Planning Guidelines and the Development Plan.*

Chapter 7 of the FCDP also outlines the situation within the County in respect of foul drainage and wastewater treatment, and notes that:

> *Wastewater from the south of the County including Howth, Baldoyle, Sutton, Portmarnock, Santry, Meakstown and Blanchardstown discharges to the Regional Waste Water Treatment Plant at Ringsend operated by Dublin City Council. Ringsend was designed for a capacity of 1.64 million population equivalent (PE) but is now operating slightly above this. It is necessary to upgrade and expand*

[14] Aside from a small c.60m corridor *area in DCC*.

the treatment plant to its maximum capacity which is estimated to be 2.1 million PE (subject to obtaining relevant permits)[15]*.*

The Greater Dublin Strategic Drainage Study (GDSDS) involving the seven local authorities of the GDA was completed in 2005 and has an associated Strategic Environmental Assessment (SEA).

The Study carried out an in depth assessment of Dublin's drainage system. Key recommendations of the GDSDS Final Strategy, was the expansion of Ringsend Wastewater Treatment Plant to its ultimate capacity and the development of a new Regional Wastewater Treatment Plant, Orbital Drainage Network and Marine Outfall in the northern part of the GDA, are being pursued. Irish Water is developing the Greater Dublin Drainage (GDD) Project (previously led by Fingal County Council). The GDD is a regional wastewater project designed to serve the Greater Dublin Area by augmenting the Ringsend Wastewater Treatment Plant. It implements the recommendations of the Greater Dublin Strategic Drainage Study (GDSDS) Final Strategy and the SEA of the GDSDS"

Specific objectives provided within the FCDP, and considered to be directly relevant to the proposed Project, include the following:

Objective WT01: *Liaise with and work in conjunction with Irish Water during the lifetime of the plan for the provision, extension and upgrading of waste water collection and treatment systems in all towns and villages of the County to serve existing populations and facilitate sustainable development of the County, in accordance with the requirements of the Settlement Strategy and associated Core Strategy.*

Objective WT02*: Liaise with Irish Water to ensure the provision of wastewater treatment systems in order to ensure compliance with existing licences, EU Water Framework Directive, River Basin Management Plans, the Urban Waste Water Directive and the EU Habitats Directive.*

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.*

Objective WT05: *Seek the best available technology in all waste water treatment plants proposed for the County.*

Objective WT07: *Require all new developments to provide separate foul and surface water drainage systems and to incorporate sustainable urban drainage systems.*

[15] In November 2012, and under ABP reference 29N YA0010 the expansion of the capacity of the Ringsend Treatment Plant, from 2.1PE to an overall installed capacity of 2.4m PE, was granted approval

Objective WT08: *Prohibit the discharge of additional surface water to combined (foul and surface water) sewers in order to maximise the capacity of existing collection systems.*

Objective WT11: *Establish a buffer zone around all wastewater treatment plants suitable to the size and operation of each plant. The buffer zone should not be less than 100m from the odour-producing units.*

Objective WT12: *Establish an appropriate buffer zone around all pumping stations suitable to the size and operation of each station. The buffer zone should be a minimum 35 metres – 50 metres from the noise/ odour producing part of the pumping station to avoid nuisance from odour and noise.*

Two objectives relating to waste management (Section 7.5), are also considered to be of direct relevance, and are also highlighted here below.

***Objective WM14*:** *Promote the recovery (including recovery of energy) from waste in accordance with the Eastern Midlands Region Waste Management Plan 2015 -2021 (or any subsequent plan).*

***Objective WM15**: Implement the adopted Sludge Management Plan for the County and update the plan as required. Work with Irish Water and other relevant stakeholders to ensure the provision of facilities for the safe and sustainable management of sludges (sewage, waterworks, agricultural, industrial and septic tank) that are generated within the County having regard to the Fingal Sludge Management Plan and relevant environmental legislation.*

Project Response:
The proposed Project is compliant with the provisions and objectives of the FCDP. As has been identified above, support and provision for the proposed Project is expressed in a number of instances and by various references in the FCDP. Key provisions of the development plan are included within Section 7.2 and Objective WT03, wherein specific reference is made to the GDD project. The proposed Project also complies with a significant number of the Plan's objectives for foul drainage and wastewater treatment (as is reflected within the planning application documentation and as further outlined within this Planning Report).

Whilst technically, WT07 and WT08 would not be considered to directly apply to the proposed Project, SuDS have been incorporated into the site design. In addition, zoned lands between the N2 and M1 will be served by the proposed Project and future connection details for these developments will have to be agreed with IW. Clearly IW will be implementing the spirit of both of these objectives when agreeing the connection details.

It should be noted that whilst the FCDP contains reference to the Fingal County Sludge Management Plan (made and finalised in 2013, together with an associated SEA), the provisions of the FSMP have largely been superseded by the Irish Water National Wastewater Sludge Management Plan (NWSMP), for which an SEA was also undertaken. Notwithstanding, and within the context of GDD, the Fingal SMP detailed proposals for dealing with non-hazardous sludges arising in Fingal from a number of sources, including Agriculture, Industry, Water Treatment and Wastewater Treatment. It recommended a sludge hub centre to be co-located on the site of the proposed

Regional Wastewater Treatment Plant (WwTP), as part of the Greater Dublin Drainage project to treat and thermally dry municipal wastewater sludges arising in Fingal, and this is largely representative of the subject GDD development proposal.

With regards to 'buffers' relative to odour producing units, the closest building to the Abbotstown pumping station is the St. Francis Hospice which is located c. 200m away – this significantly exceeds the distance specified within WT12 highlighted above. In addition, a feature of the Alternative Site Assessment is the implementation of a 300m buffer from any existing receptors – this is substantially in excess of the 100m buffer sought through Objective WM11. In regard to the proposed site layout itself, this incorporates a 'green' buffer to the west, north and east of the proposed Project which varies in width between 60-120m. This buffer, together with the proposed extensive landscaping, will ensure that a minimum of 100m is maintained between any odour producing elements of the proposed Project, as well as a "*consistency with the character of the landscape with the Greenbelt"*, and will integrate and screen the proposed WwTP and Sludge Hub Centre within the area. To the south of the proposed Project, a campus-style landscaped edge, coterminous with the road, and the width of the road itself, will act as the proposed Project buffer in this direction.

In respect of WM14, the proposed Project incorporates sustainable treatment for wastewater sludge and domestic septage, generated within the administrative area of Fingal. This will produce a 'biosolid' end product which will be landspread in accordance with the detailed environmental appraisal and nutrient management plans that are required for any lands on which 'biosolid' is used. In addition, the proposed Project will utilise the bio-gas produced during the treatment process as an energy source, on site. The implementation of the proposed Project would thus comprise the direct realisation of the objectives relating to sludge as highlighted above.

The proposed Project will be strategically located in order to ensure a maximum benefit to existing zoned lands within the Fingal County Council administrative area. The proposed Project will assist in providing the necessary enabling wastewater servicing infrastructure for these lands and areas, and will therefore assist in their future sustainable development[16].

3.4.2 FINGAL LOCAL ECONOMIC COMMUNITY PLAN 2016 - 2020

The Fingal Local Economic Community Plan (LECP) is not a spatial land-use plan. It does however provide a framework for agencies and organisations to reference and crosslink their own strategies and plans. As such it sets out the objectives and actions needed to promote and support the economic development and the local and community development of Fingal, both by itself directly and in partnership with other economic and community stakeholders.

[16] Chapter 3, EIAR: "*In the absence of the implementation of the above proposed drainage strategy the SEA considered that inadequate wastewater treatment and drainage management would result in development constraints within the area covered by the strategy. Thus, Local Authorities (LAs) would be inhibited from effectively implementing their respective County and City Development Plans*".

The LECP has been formulated to align with the RPG's as well as to complement and be consistent with the FCDP, and shares a number of broad objectives with the County Development Plan. Within this context, section 4.5 of the LECP specifically highlights a number of the aims of the FCDP, including at 17 and 19 specifically (which can be considered to directly relate to the proposed GDD Project), the following:

> *17. Work with Irish Water to secure the timely provision of the water supply and drainage infrastructure necessary to facilitate the sustainable development of the County.*
>
> *19. Secure the timely provision of community infrastructure including schools, recreational and sport facilities, roads, waste water treatment facilities and emergency services, commensurate with the number of housing units proposed for construction on lands zoned for residential development".*

The LECP Action Plan identifies six themes supported by ten high-level goals, which are, in turn, built upon by a suite of thirty-eight objectives. Objectives are envisaged as being achieved through the implementation of specific, time-bound and measurable actions. Within the theme of Urban Towns and Rural Communities (T6) – Urban Centre Revitalisation, it is noted that "improvements *to WwTP and network capacity will improve water quality and improve opportunity for beaches to achieve Blue Flag status*".

Project Response:
The proposed Project will support the LECP in respect of its aims to improve community facilities and amenities and associated economic development, as it will ensure significant improvement to wastewater treatment, disposal and network capacity within the County. It thus represents an opportunity to retain and improve water quality and consequently, opportunities for beaches to retain (Portmarnock Beach/ Velvet Strand) and achieve Blue Flag status.

3.4.3 FINGAL SLUDGE MANAGEMENT PLAN 2013

The *Fingal Sludge Management Plan, 2013* (FSMP) has been superseded by the NWSMP. The FSMP did however recommend a sludge hub centre to be co-located on the site of the proposed Regional Wastewater Treatment Plant as part of the Greater Dublin Drainage project, to treat and thermally dry municipal wastewater sludge arising in Fingal. The proposed Project does not include thermal drying of the sludge, and this is in line with the provisions of the NWSMP.

Project Response:
The proposed Project incorporates the proposal for thermal hydrolysis and anaerobic digestion in the treatment of the sludge and using the bio-gas produced from this process to fuel onsite Combined Heat and Power (CHP) generators to produce electrical and thermal energy. This is also in accordance with a number of Fingal County Development Plan objectives relating to sustainable energy, as is highlighted within the Planning Report accompanying the concurrent SID application lodged.

3.4.4 DUBLIN CITY DEVELOPMENT PLAN 2016-2022

The *Dublin City Development Plan 2016-2022* highlights the infrastructural challenges facing the Dublin region, particularly in the supply and demand for high-quality drinking water and for wastewater treatment. It notes that '*progressing the development of the Greater Dublin Regional Wastewater Treatment Plant, Marine Outfall and orbital sewer to be located in the northern part of the Greater Dublin Area is essential to the future growth of the Dublin region*', and commits, through policies SI1 and SI2, to support and facilitate Irish Water in the development and improvement of water and wastewater systems, including the '*development of the Greater Dublin Regional Wastewater Treatment Plant.*'

3.4.5 MEATH COUNTY DEVELOPMENT PLAN 2013-2019

The *Meath County Development Plan 2013–2019* acknowledges the strategic role of the development of the Greater Dublin Strategic Drainage Study and its role in the future sustainable development of the County and the region. It is the policy of the Council to ensure that all developments within its jurisdiction have regard to the policies expressed in the Greater Dublin Strategic Drainage Study.

3.4.6 KILDARE COUNTY DEVELOPMENT PLAN 2017-2023

The *Kildare County Development Plan 2017-2023* acknowledges that wastewater collection and treatment capacity within the County has struggled to keep pace with development, and notes that the '*capacity of treatment works and the associated networks will be a key factor that will influence the future development of the county*'. The Development Plan highlights the fact that the County is dependent on strategic national and regional solutions to the provision of water and wastewater infrastructure, and notes further that the Greater Dublin Strategic Drainage Study delivered an overview of the performance of the drainage infrastructure in the region's catchments and proposed infrastructural improvement works to facilitate anticipated growth.

Project Response:
Implementation of the proposed Project will assist in providing additional capacity within a number of existing WwTPs within the GDA, including some within Dublin, Meath and Kildare, as it will divert a proportion of the wastewater loadings from these systems to the new WwTP. This will assist in the sustainable growth and development of these areas, which are currently being hampered by capacity issues.

3.4.7 PORTMARNOCK SOUTH LOCAL AREA PLAN (2013) – extended from 7th July 2018 – 6th July 2023

The *Portmarnock South Local Area Plan* (LAP) relates to c. 86 hectares of land located to the south and east of Portmarnock train station as illustrated in figure 3.1 below. The orbital sewer corridor (Clonshagh to Stapolin section) extends through Open Space (OS) and High Amenity (HA) zoned lands within the Plan boundary.

The LAP outlines that sufficient services are essential to enabling development in the area and highlights service capacity pressures in the LAP area. The LAP acknowledges that the GDD Project will provide a long-term solution for wastewater network and treatment services to serve the area and states that "*The Greater Dublin Drainage Project aims to provide strategic drainage infrastructure required for the Greater Dublin Area (GDA) that*

will facilitate employment, social progress, and economic growth while also protecting the environment". The LAP also provides policy supporting the proposed Project, which includes to "*Protect existing and future infrastructure though the provision of wayleaves/ corridors and the co-ordination of developments with the requirements of infrastructure service providers*" (Objective GDDS 1).

The LAP acknowledges that the outfall pipe related to the Clonshagh site will be undergrounded through the OS lands.

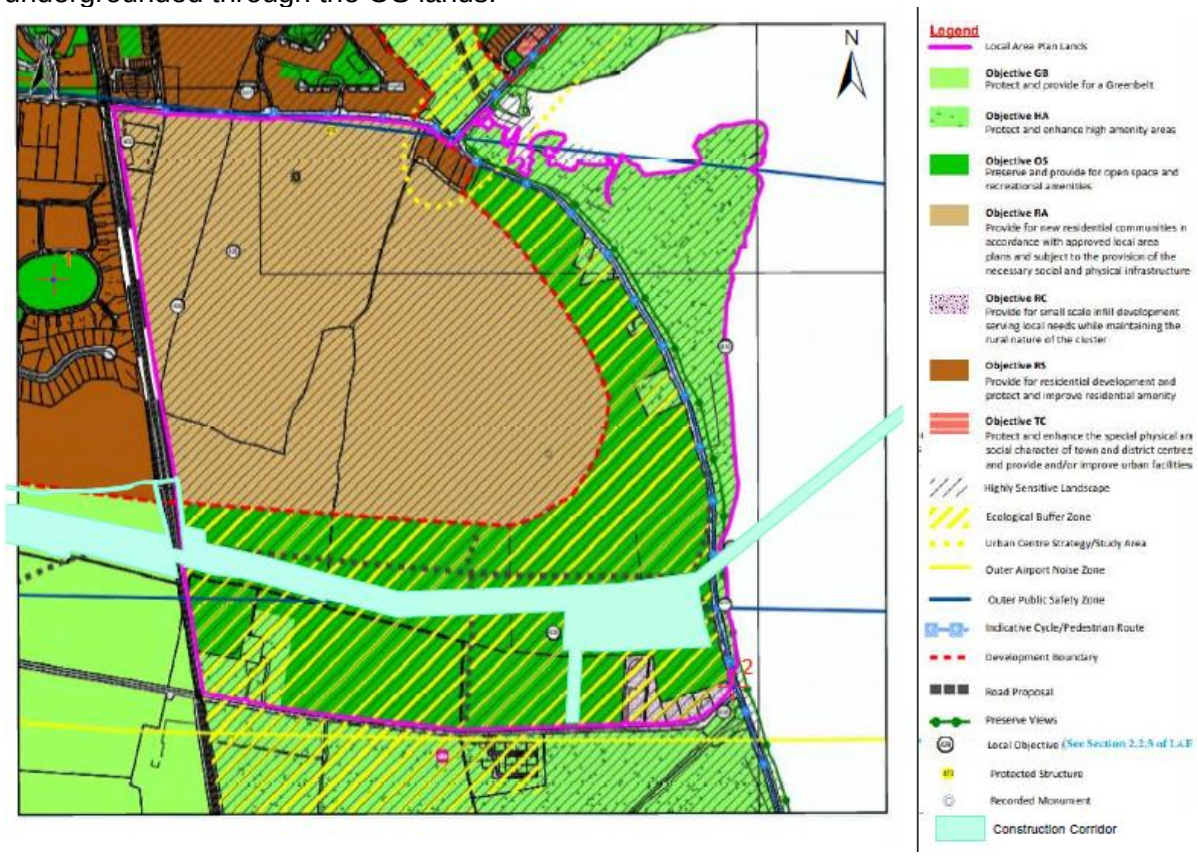


Figure 3.1 Portmarnock South LAP Boundary with proposed Project Corridor

The open space lands are also designated as an ecological buffer zone under the LAP, the purpose of which is "*to protect the integrity of the nationally and internationally designated sites, [Baldoyle Bay in this case] by providing suitable habitat for key species such as birds and providing for compatible land-uses around the designated sites*". Objective NH18 of the Fingal Development Plan 2017-2023 seeks to "*protect the functions of the ecological buffer zones and ensure proposals for development have no significant adverse impact on the habitats and species of interest located therein*". The LAP specifies that these lands will be developed as multi-functional landscapes, where agricultural uses are maintained, with nature conservation targets and low-intensity recreational uses.

With regard to landscape character, the LAP lands are categorised as 'Estuary and Coastal Character Types' with the 'Estuary Type' deemed to have exceptional value (as recognised by national, EU and international designations). The aesthetic quality of the estuaries is also regarded as outstanding, with the 'Coastal Character Type' characterised as having exceptional landscape value. The LAP notes further that both "*the Coastal and Estuary Character Types are highly sensitive to development due to the exposed nature of many of the coastal and estuarine areas making them particularly vulnerable to intrusive development . The setting and character of coastal areas could easily be damaged by*

inappropriate development." The lands are also subject to a sensitive landscape designation, with protected views along the Coast Road. Accordingly, any proposed development would need to ensure that it is not unduly intrusive, nor that it would negatively impact the setting and character of the landscape or any protected views.

The construction of the orbital sewer corridor through these lands will be undertaken so as to mitigate any potential negative impact on the lands having regard to their landscape and other designations as identified above. Full details of these measures are set out in the NIS and EIAR that accompany the SID application. Once construction of the pipeline has been completed, the above-ground land will be reinstated. The proposed Project will therefore have no lasting or long-term negative landscape impacts on these lands or its Open Space zoning objective. The development of this infrastructure will limit the above-ground development which can be undertaken at this location, which is considered to be in compliance with the LAP vision in respect of development in these areas, and to maintain these lands as parklands and ecological open spaces.

Baldoyle Bay, a designated SAC and SPA, is adjacent and to the east of the subject lands. The LAP seeks to ensure that no adverse impacts arise on this protected site as a result of the Plan. Full details of the measures which will be undertaken to mitigate any potential impact on this protected site are set out in the NIS and EIAR (Chapter 24, and within each separate chapter).

The LAP also provides for the reservation of lands adjacent to the Dublin-Belfast railway line to accommodate its future expansion. The orbital sewer will be undergrounded below this railway line. Irish Water has been involved in ongoing discussions with Iarnród Éireann in relation to the construction of the orbital sewer corridor. The development of this infrastructure will not restrict the future expansion of the Dublin-Belfast railway line.

3.4.8 THE DARDISTOWN LOCAL AREA PLAN (2017 - 2023)

The Dardistown LAP relates to approximately 154 ha of lands bounded by Dublin Airport to the north, the M50 to the south, and the Naul and Swords Roads (R108 and R132) to the west and east respectively (see figure 3.2 below). The Plan identifies that "*there is no existing public foul sewer within the LAP lands*" and states that new sewer connections will be required to accommodate the supply of serviced lands. The Proposed Project will be routed to the immediate north and alongside the Dardistown LAP lands, and will facilitate the provision of serviced lands which will enable the further development of the area.

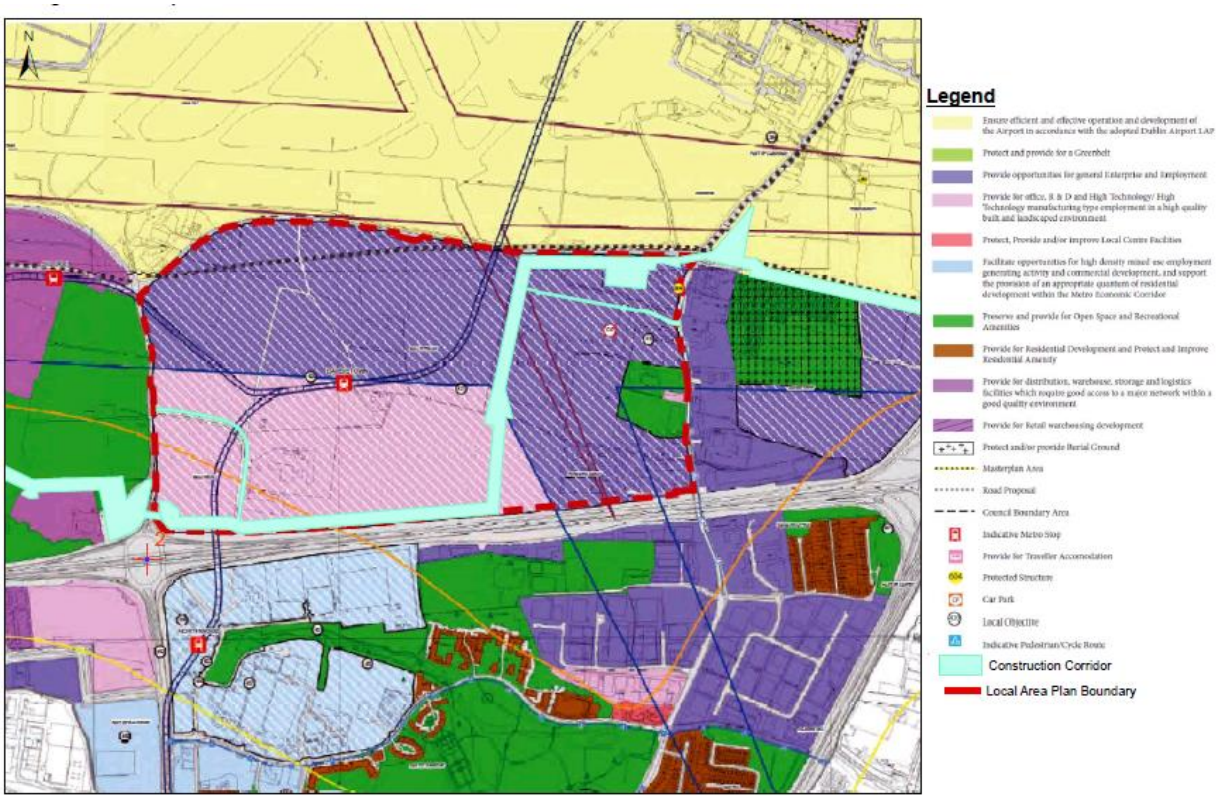


Figure 3.2 Dardistown LAP Boundary and FCDP Extract with proposed Project Corridor

The overarching vision for these LAP lands is "*to provide for a strategic employment node, comprising inter alia, office, research and development and high technology manufacturing, maximising opportunities presented by the lands strategic location well served by air, existing and planned high capacity public transport and the national road network, and all within a high quality sustainable environment*". It is submitted that the development of the orbital sewer through the LAP lands will support this strategic vision and as essential public infrastructure, will support the development of an employment node on these lands.

3.4.9 DUBLIN AIRPORT (DA) LOCAL AREA PLAN 2006

The statutory period of the Dublin Airport LAP was extended in 2012 to 23rd June 2015. As the 2006 LAP has expired, Fingal County Council intends to prepare a new LAP for the airport and all associated lands. Notwithstanding, this review considers the context of the 2006 LAP, as it provides some basis for consideration especially in respect of the LAP boundary and likely zoning objectives.

The lands subject to this LAP are identified in Figure 3.3 below. The orbital sewer corridor will traverse lands to the south-east of the LAP boundary which are zoned for *"runways/ taxiways"* and as an *"ancillary aviation-related development zone".* The lands zoned for *"runways/ taxiways"* accommodate the existing southern runway of the Airport.

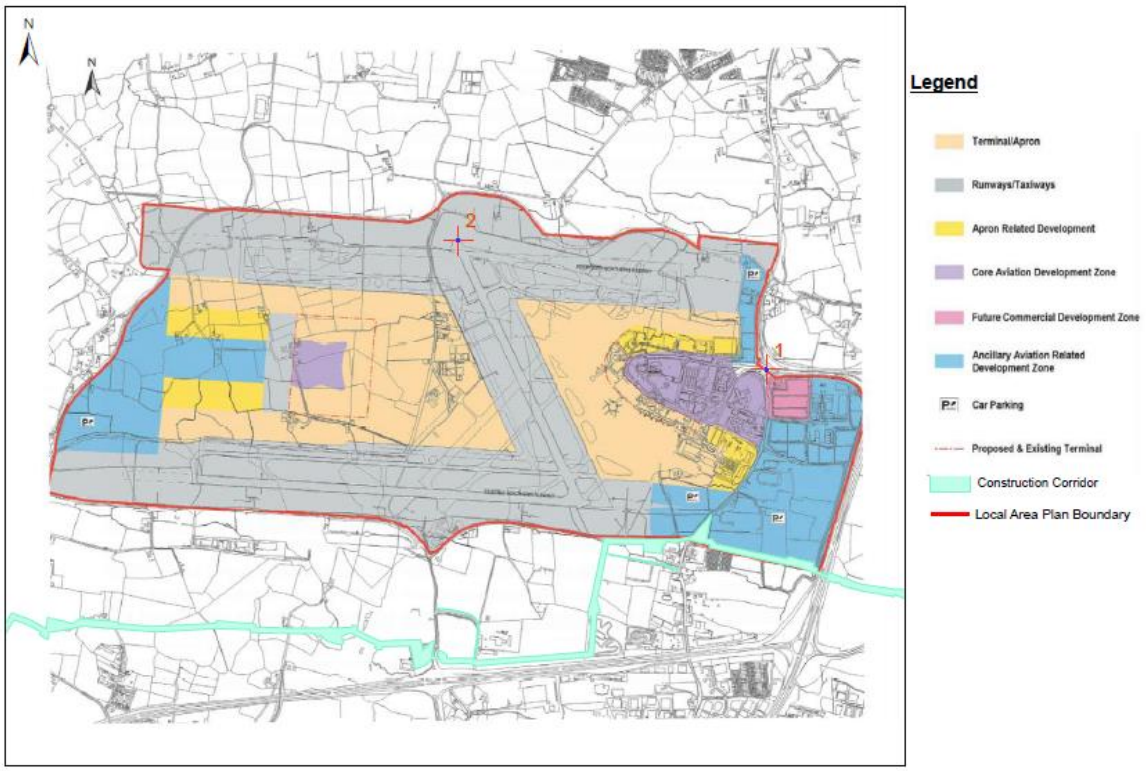


Figure 3.3 Dublin Airport LAP Boundary with proposed Project Corridor

The construction of the orbital sewer through these lands will not restrict the future development of lands within Dublin Airport, and will in fact assist in providing essential and critical enabling infrastructure for the future growth and development of the airport and these lands.

3.5 OVERALL COMPLIANCE WITH PLANNING POLICY

In conclusion, it can be seen that the proposed Project is supported by the specific provisions, policies, and objectives, across the full hierarchy of plans and strategies, and fully accords with the overall development principles set out in the above-outlined relevant planning policy documents.

To reiterate and summarise, the proposed Project:

- Is fully in accordance with the provisions of EU Directives, the NPF (and associated NDP), as well as those of the RPG GDA, as it will provide for the improvement and protection of the environment, provide for much needed headroom in wastewater services, and represents an integrated wastewater management approach, which has undergone rigorous assessment and stakeholder engagement.

- Is fully supported by the policies and objectives of the Eastern-Midlands Regional Waste Management Plan 2015-2021. The Greater Dublin Strategic Drainage Study (GDSDS) in 2005, and its associated Strategic Environmental Assessment (SEA) in 2008, recommended that a new regional wastewater treatment facility be developed in north County Dublin.

- The implementation of the proposed Project will serve the GDA and Dublin Gateway. It will thus facilitate and support its growth as a strategic centre, and

will limit the significant environmental risk posed by the lack of existing capacity within existing wastewater treatment plants and associated infrastructure.

- The proposed Project is compliant with the provisions and objectives of the NWSMP. The proposed sludge hub centre will be co-located with the proposed WwTP; and the proposed RBSF, to be located on a separate site also within the Fingal County Council administrative area, has been appropriately assessed on a regional basis. The considerations and criteria outlined within Sections 9.5 – 9.7 of the NWSMP, have been incorporated into the design considerations and project proposal, where appropriate, and the proposals in respect to the re-use of biosolids are in line with the associated NWSMP key action, and FCDP objectives.

- The proposed Project is also compliant with the specific relevant provisions and objectives of the Fingal County Development Plan (FCDP) and associated Local Area Plans (LAPs). As has been identified above, support and provision for the proposed Project is expressed in a number of instances and by various references within the FCDP 2017-2023.

- The proposed Project was initiated by Fingal County Council in 2011 on behalf of the four Dublin Local Authorities and those in Meath, Kildare and Wicklow. Fingal brought the proposed (GDD) Project through a rigorous alternative sites and routes assessment process and identified a preferred project solution and this has since been updated and confirmed by Irish Water [17]. The proposed Project thus reflects a co-ordinated and concerted effort by all local authorities and relevant stakeholders to ensure that the necessary infrastructure and measures are in place, as required, and reflected within relevant policies and provisions.

Aside from setting the broad development framework for the county as a whole, the FCDP also outlines additional specific land use, planning and environmental policies, including relevant Development Control Standards, which must be taken into account when considering any application for permission. These policies, in the context of the proposed Project, are considered in more detail in the following section of this report 'Sectoral Policies and Objectives.'

[17] *Irish Water Greater Dublin Drainage Strategy: Overview & Future Strategic Needs Asset Planning (May 2018) – submitted as part of the SID Application documentation*

4. SECTORAL POLICIES AND OBJECTIVES

This section of the report will demonstrate how the proposed Project accords with all relevant Fingal County Development Plan sectoral policies and objectives.

It should be noted that while a complete assessment of all sectoral policies and objectives in the relevant Development Plan was carried out, the following sections address those policies and objectives which are of greatest relevance to the proposed Project.

4.1 FINGAL COUNTY DEVELOPMENT PLAN 2017-2023

The Fingal County Development Plan 2017-2023 (FCDP), which has also been subject to Strategic Environmental Assessment (SEA), sets out the overall vision, strategies, policies and objectives for the county as a whole, and seeks to *"develop and improve, in a sustainable manner, the social, economic, environmental and cultural assets of the County"*.

The FCDP takes the form of a written statement (Volume 1), with accompanying maps. The most relevant chapters in Volume 1 for the purposes of this review are those that set out detailed policies and objectives namely:

- Chapter 1 – Introduction & Strategic Context
- Chapter 2 – Core Strategy & Settlement Strategy
- Chapter 3 – Placemaking
- Chapter 4 – Urban Fingal
- Chapter 6 – Economic Development
- Chapter 7 – Movement and Infrastructure
- Chapter 8 – Green Infrastructure
- Chapter 9 – Natural Heritage
- Chapter 10 – Cultural Heritage
- Chapter 11 – Land Use Zoning Objectives
- Chapter 12 - Development Management Standards

Maps relevant to the proposed Project, are Sheet 9 (Malahide – Portmarnock); Sheet Sheet 11 (Fingal South), and Sheets 12 and 13 (Blanchardstown North and Blanchardstown South, respectively).

4.1.1 CHAPTER 1 – INTRODUCTION & STRATEGIC CONTEXT

The strategic vision for Fingal, as outlined within the FCDP, comprises a number of aspects, key amongst these in respect of the proposed Project, being to:

- *"Ensure consistency with the Council's Core, Settlement and Housing Strategies to provide high quality housing of a sufficient scale and mix, located in optimum locations and aligned with adequate infrastructure, services and amenities.*
- *Make better use of key resources such as land, water, energy, waste and transportation infrastructure."*

Associated with the strategic vision, the FCDP outlines a number of aims which it seeks to achieve. These include, at 2 and 10, to:

> *"2. Provide for the future wellbeing of the residents of the County by:*

● Supporting economic activity and increasing employment opportunities.
● Protecting and improving the quality of the built and natural environments.
● Ensuring the provision of adequate housing, necessary infrastructure and community facilities.

10. Co-operate with the Eastern and Midland Regional Assembly, Local Authorities and other stakeholders in meeting the needs and development requirements of the County and the (Greater Dublin Area) GDA in accordance with the National Spatial Strategy and the Regional Planning Guidelines for the GDA and any successor policy documents."

In relation to the above, the FCDP notes that the Main Aims will be delivered through a number of Strategic Policies, with Strategic Policies 17, 18 and 22, being considered to relate to the proposed Project, ie:

17. 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.*

18. Secure the timely provision of infrastructure essential to the sustainable development of the County, in particular in areas of ***resource and waste management, energy supply, renewable energy generation and Information and Communications Technology (ICT).***

22. Minimise the County's contribution to ***climate change****, and adapt to the effects of climate change, with particular reference to the areas of land use, energy, transport, water resources, flooding, waste management and biodiversity, and maximising the provision of green infrastructure including the provision of trees and soft landscaping solutions.*

Chapter 1 also provides a brief environmental overview of the County, noting that there are a number of environmental challenges for Fingal. In consideration of the components comprising the proposed Project, a number of these are also highlighted in respect of the proposal. These comprise:

"*● Protecting the ecological integrity of European (Natura 2000) sites, the Special Amenity Areas and the Dublin Bay Biosphere Reserve, while allowing for ongoing growth and development.*
● Maintenance and improvement of the environmental and ecological quality of Fingal's watercourses and coastal waters pursuant to the requirements of the Water Framework Directive.
● Facilitating the provision of waste water treatment systems in order to ensure compliance with the requirements of the Water Framework Directive and to facilitate sustainable development in the County."

Project Response:
The proposed Project will ensure that existing environmental risk posed by the lack of existing capacity within existing wastewater treatment plants and associate infrastructure, will be reduced and improved.

Adherence to the proposed Construction and Environment Management Plan and the Surface Water Management Plan will ensure that the environmental and ecological quality and integrity of designated sites, watercourses and coastal waters, is maintained.

The operational phase of the proposed Project, will reduce the extent of overflows from existing sewer networks to local water networks and courses, through the provision of additional waste water treatment capacity and diversion of a proportion of the wastewater loadings from a number of existing WwTPs into the new WwTP, and therefore improve the water quality of these. Assessments and modelling undertaken as part of the proposed Project design, demonstrate that the discharge will still allow receiving waters to achieve their environmental objectives due to the level of treatment being applied to the waste waters.

It will also assist Ireland in meeting its obligations under the Urban Wastewater Directive (91/271/EEC) and the Water Framework Directive (WFD) (91/271/EEC, the Sewage Sludge Directive (86/278/EEC), the Waste Framework Directive (2008/98/EC), and the Wastewater Discharge (Authorisation) Regulations 2007).

In addition, it represents the provision of key growth enabling infrastructure for one of the Country's primary development centres, and support the sustainability and quality of life for those living within the wider hinterland.

4.1.2 CHAPTER 2 – CORE STRATEGY AND SETTLEMENT STRATEGY

The core strategy states that a priority for the County is the consolidation and sustainable intensification of existing towns and established urban areas, through infill development and brownfield redevelopment, and that this strategy maximises efficiencies from already established physical and social infrastructure, in line with regional and national policy.

It is noted under the subsection titled 'New Residential Zoning', that this strategy "*will also ensure that the Council is in a strong position to influence infrastructure providers at national level, including Irish Water, in that there will be clear evidence of the Council's commitment to maximising investment in infrastructure through its policy of consolidation. The development of larger areas of residential or mixed-use lands will only take place subject to the necessary infrastructure being available and to this end will be subject to a Local Area Plan*".

The core strategy highlights Lissenhall (Swords) as a 'Primary Growth Town' and strategic growth area (in accordance with the RPG's). It is the stated FCDP long-term vision for Swords, that the area represents an opportunity to create a sustainable, green city with "*with a commensurate level of jobs, services and infrastructure to support a potential population of 100,000*[18]*."* At its core however, the Plan envisages that the future development and growth of Fingal will take place in accordance with an overarching hierarchy of settlement centres, with each accommodating an agreed quantum of future development appropriate to its respective position in the hierarchy.

[18] There is however, an acknowledgement that the current development envelope of Swords would have a capacity to only reach a population of 65 – 70,000 people…"*and can only be developed in tandem with the timely delivery of the necessary physical infrastructure".*

Whilst the FCDP Core Strategy projects a likely need for approximately 49,541 additional residential units in Fingal over the period from 2016 – 2026 (as outlined in Table 2.8 of the FCDP), it must be noted that this projection is made in the context of the 2011 CSO census figures and data, albeit that an acknowledgement is given that "*the population of the Dublin Region has not grown to the extent targeted by the RPGs,* and that *Fingal may be an exception within the Dublin Region. Preliminary Census 2016 figures indicate Fingal has exceeded the RPGs population targets*."

It is considered that one of the key aspects to the FCDP core strategy being realised, is the implementation of Objective SS06, which provides as follows:

> ***Objective SSO6**: Identify and support the provision of key enabling infrastructure at strategic sites in Fingal County to facilitate their release for development in response to the current housing crisis.*

Greenbelts are also highlighted within the context of the County's settlement strategy, due to their supportive role "*safeguarding the innate value of the Fingal countryside".* It is however explicitly provided that:

> *"Proposed development within the Greenbelt shall clearly demonstrate a functional need for such a location, and consistency with the established character of the landscape of the area".*

The above is further supported by Objectives SS09 and SS11 respectively, which state that the Council will:

> ***Objective SS09:** Promote development within the Greenbelts which has a demonstrated need for such a location, and which protects and promotes the permanency of the Greenbelt, and rural character of the area.*
>
> ***Objective SS11:** Promote opportunities for the enhancement and protection of biodiversity and natural heritage within the Greenbelt.*

Project Response:
Chapter 3 (Project Need) of the EIAR outlines the population projections associated with the 'Planning Need' for the proposed Project. These were based on the 2016 Census and an analysis of drainage catchments by Jacobs. Population growth rates were also based on work done by Dr. Brian Hughes for the Water Supply Project Eastern and Midlands Region (WSP), in 2014.

The work undertaken by Dr. Hughes, which constitutes an independent assessment and projections of population growth, corroborates and supports (through an analysis of the published final census 2016 figures), the findings that the population growth of Fingal has surpassed projections, and does in fact, comprise the fastest and largest growing urban area.

On the basis of the verified population growth, and evidence-led projections, there is an imperative to being able to provide the additional supporting infrastructure in the form of wastewater treatment and facilities to service the County and hinterland region. The implementation of the proposed Project, which comprises such infrastructure and facilities, would also assist in realising Objective SS06.

Whilst elements of the proposed Project are to be located within Greenbelt zoned lands, the functional and technical requirements of such a development (as outlined within the Alternative Sites Assessment reports), demonstrates their need and requirement to be installed/ implemented in such a location. In this regard it is again highlighted that the 'site' was selected following a rigorous 4 phase Alternative Site Assessment (ASA), with a final report identifying the preferred site, which was published in June 2013. The provisions of these have been summarised and included within the EIAR.

4.1.3 CHAPTER 3 – PLACEMAKING

Within the context of this chapter, the FCDP statement of policy aims to *deliver successful and sustainable communities through the provision of infrastructure, adequate housing, open space, retail, leisure, employment, community and cultural development supporting the needs of residents, workers and visitors, whilst conserving our built and natural heritage.*

Five main themes are noted as being key to achieving successful and sustainable areas, including sustainable communities; public realm; sustainable design and standards; open space; and community infrastructure, facilities and services.

A number of mechanisms are identified in order to realise these, including the formulation of Strategic Development Zones, Local Area Plans, Masterplans and Urban Framework Plans. It is noted further that in respect of Masterplans, *the Fingal Development Plan will identify large or key sites that will require the preparation of approved Masterplans and subsequent planning applications will be required to adhere to the approved Masterplans. The Planning Authority considers Masterplans as an effective means of guiding new development and providing essential social and physical infrastructure in a phased and sustainable manner.* The FCDP lists the requirements for consideration and inclusion within such Masterplans, and also provides a number of associated objectives, including:

> ***Objective PM14:*** *Prepare Masterplans for areas designated on Development Plan maps in co-operation with relevant stakeholders, and actively secure the implementation of these plans and the achievement of the specific objectives indicated.*
>
> ***Objective PM15:*** *Implement Masterplans prepared in accordance with the Development Plan.*

The FCDP aims in relation to placemaking, also seek the provision of sustainable new buildings which positively contribute towards a reduction in energy consumption, and this is also supported by objective, with ones considered to be relevant to the GDD Project comprising:

> ***Objective PM28:*** *Improve the efficiency of existing buildings and require energy efficiency and conservation in the design and development of all new buildings within the County.*
>
> ***Objective PM29:*** *Promote energy efficiency and conservation above Building Regulations standards in the design and development of all new buildings and residential schemes in particular and require designers to demonstrate that they*

have taken maximising energy efficiency and the use of renewable energy into account in their planning application.

Open Space is regarded as being integral to the provision of high-quality green infrastructure for communities in Fingal, and the FCDP states that it therefore forms a core element of the County's Green Infrastructure Strategy, with an emphasis also being qualitative provision of open space, as opposed to quantitative provision. In general, the five basic principles outlined in respect of open space provision (ie. Hierarchy, accessibility, quantity, quality, and private open space), are seen to be largely applicable to residential and commercial type development proposals. Nonetheless, also associated with open space provision, is the requirement for all new developments to include sustainable drainage systems (SuDS).

Project Response:
A small section of the proposed WwTP and Sludge Hub Centre site is located within High Technology (HT) zoned lands which are designated as being subject to a Masterplan (Masterplan 11.D). In addition, a section of the outer orbital pipeline corridor is proposed on lands with a General Employment zoning objective which are also subject to a Masterplan being prepared (MP11.B). Implementation of the proposed Project would ensure the the provision of key facilitative and enabling infrastructure for these Masterplan Areas, and support the sustainable growth and development of them.

As is outlined within the application documentation, the proposed Project will provide sustainable treatment for wastewater sludge and domestic septage generated within the administrative area of Fingal. This will produce a 'biosolid' end product, and the project will utilise the bio-gas produced during the treatment process as an energy source, on site.

Chapter 4 of the EIAR also notes that Irish Water is committed to designing, building and operating assets to ensure energy efficiency. The plant, equipment, buildings and systems associated with this project will be designed, equipped, operated and maintained in such a manner as to ensure a high level of energy performance and that energy is used efficiently. The implementation of elements of the proposed Project will be designed following the requirements set out in IS 399 Energy Efficient Design and Management. This standard requires that any design features or methods that may reduce energy consumption are considered and the process of their consideration is clearly documented. The Energy Performance of Buildings Directive (EPBD) requires Near Zero Energy Buildings (NZEB) by 2020 and significantly increases the amount of onsite renewable energy used in buildings. This requires consideration in the lifecycle assessment and embodied carbon calculation. It will be relevant to all buildings constructed as part of this project. The detail design will account for this, and also follow SEAI guidelines including development of energy balances, determination of the minimum achievable energy performance indicator (EnPi) for the design, energy Benchmarks, energy variables for the design that quantify variables that impact energy performance, and preparation of Measurement and Verification (M&V) Plans to detail how the energy performance of the design will be measured and verified as per ISO5 0015.

In respect of open space provision and the associated requirement for SuDS, the proposed Project includes such future provision at both the Abbotstown Pump Station site and the WwTP site. SUDS provision will be designed in accordance with CIRIA guidance (SUDS manual 2015, C735) and will incorporate a mix of rainwater harvesting, swales, infiltration trenches, permeable pavement, underground storm attenuation tanks

(StormTec or equivalent) and oil interceptors such that run-off is controlled to greenfield rates. Final discharge from the WwTP site will be to the Cuckoo Stream. Final discharge from the access road to the WwTP will be to the Mayne River. Final discharge from the Abbotstown Pumping Station site will be to a tributary of the Tolka. All discharges shall be in compliance with EPA standards and licensing requirements and conditions.

4.1.4 CHAPTER 4 – URBAN FINGAL

Similarly to Chapter 3 (Placemaking), Chapter 4 also refers to Masterplans. In this regard objectives are provided which detail locations where not only Masterplans, but also Local Area Plans (LAPs), are required in a number of urban areas. It is further stated that "*In accordance with Objectives PM13 and PM14 (Chapter 3, Placemaking) the LAPs and Masterplans for these lands shall be prepared and agreed by the Planning Authority prior to the submission of any planning application."*

Objective ED89 therefore refers to the preparation and/ or implementation of Local Area Plans for a number of areas, including Turnapin (Mat Sheet 11, LAP 11.C) and Dardistown (Map Sheet 11, LAP11.D).

In relation to the Development Plan objectives associated with Blanchardstown, Objective Blanchardstown 18 states that the Council will, *inter alia*, prepare and/ or implement a Masterplan for lands at Kilshane (Map Sheet 13, LAP 13.B). The main element to be included is that the lands shall be fully integrated with the adjoining General Employment lands.

In recognition of the proximity of the works and pipeline corridor proposed as part of the proposed Project, to Portmarnock - "*just north of Baldoyle Estuary, a Special Area of Conservation (SAC) and a Special Protection Area (SPA)"* - the provisions relating to this coastal settlement, are also considered hereunder.

Whilst the development strategy is largely focussed on the urban form of the town, it does also seek to "*retain and improve existing amenities, both for visitors and for residents, along the coast…in a manner sensitive to the protected natural and built heritage of the area*". Objectives associated with the strategy, and which are regarded as also being applicable to some extent to the proposed Project, include:

> ***Objective PORTMARNOCK 4:*** *Protect and manage the flood plain of the Sluice River to the south of Portmarnock and ensure that its integrity as a natural habitat is maintained; and investigate the potential of a riverside walkway.*
>
> ***Objective PORTMARNOCK 6:*** *Protect and preserve the character and amenity of Portmarnock Beach, in view of its importance to the identity of the town and as an amenity for the domestic and foreign visitors, by protecting the beach from any development likely to adversely impact on water quality, integrity of the dunes ecosystem, biodiversity, visual amenity or excessive noise pollution while supporting activities or developments which would add to the amenity.*
>
> ***Objective PORTMARNOCK 7:*** *Prepare and/or implement a Local Area Plan for lands at Portmarnock South to provide for strategic development of the area as a planned sustainable mixed use residential development subject to the delivery of the necessary infrastructure. (Refer to Map Sheet No. 9, LAP 9.A)*

Project Response:
With regard to the Local Area Plans for Turnapin and Dardistown (extended from 13 November 2017 until 12 November 2022), the proposed Project will provide enabling infrastructure and facilities to service the wastewater requirements and needs of these areas and surrounding lands.

The Flood Risk Assessment (FRA) accompanying the SID application documentation (within Chapter 17 (Hydrology & Hydrogeology), Appendix 1 of the EIAR) demonstrates that the proposed Project will not impact on either the flood plain of the Sluice River, nor the character and amenity of Portmarnock Beach, as the proposed Project is removed from the flood plain of the Sluice, and tunneling under the sand dunes and beach will ensure that the character and amenity of Portmarnock Beach will not be affected.

Whilst the proposed Project does not fall within lands designated as comprising part of the designated LAP 9.B area, implementation of the Project will ensure that the necessary facilitative wastewater infrastructure is in place to service the development, in accordance with Objective Portmarnock 7.

4.1.5 CHAPTER 6 – ECONOMIC DEVELOPMENT

The economic vision for the County is outlined within Chapter 6. This Chapter also outlines a number of policies and supporting objectives across a range of business and industry sectors in order to ensure that sustainable economic activity and employment creation are supported and facilitated. Key functions of the FCDP role are in respect of:

> • *Providing a sufficient quantum of appropriately zoned lands to facilitate enterprise opportunities and employment creation,*
>
> • *Ensuring that such lands are logically and coherently located to maximise on existing and planned infrastructure, particularly in respect of public transportation, water services, and telecommunications,*

Five core elements of the economic strategy are identified within section 6.2, two of which can be considered to relate to the proposed Project, ie:

> *ii. Maximising the competitive advantages of being part of the Dublin City Region and the location of regionally and nationally important pieces of infrastructure,*
> *v. Ensuring proposals for economic development are served by high quality supporting infrastructure with sufficient capacity.*

The core elements are supported by a specific objective, Objective ED03.

> ***Objective ED03:*** *Ensure that economic development zonings are logically and coherently located to maximise upon infrastructural provision, particularly in relation to locating high-employee generating enterprise and industry proximate to high capacity public transport networks and links thereby reducing reliance on private car transport.*

Within this chapter, the role of supporting infrastructure is highlighted, and it is specifically noted that "*A successful and sustainable local economy is dependent upon the*

existence of supporting infrastructure that is of high quality and has sufficient capacity. This is particularly relevant for the provision of public transport, water and waste water services, broadband, international connectivity and energy supply. Fingal will engage with service providers to ensure that the required infrastructure is provided in appropriate locations identified for enterprise and employment growth".

In order to assist in giving effect to the above, Objective ED21 is also specifically provided:

> **Objective ED21:** *Liaise and engage with all relevant public service providers to ensure that zoned lands for economic development purposes are serviced in a timely fashion to facilitate opportunities for employment and enterprise creation.*

Section 6.7 (Aviation Sector) outlines the high and strategic importance of Dublin airport, air transport and the aviation sector in general, at not only a national level and to national economy, but also to Fingal. This sector is highlighted as comprising one of the most important components of Fingal's local economy. The FCDP notes the government's publication *A National Aviation Policy for Ireland*[19], and outlines the different aspects of the policy, specifically in regard to its commitment to *'creating an environment in which the sector can maximise its potential for the wider economy.'* The FCDP further identifies three principal goals in relation to national economic development, which, '*due to the role envisaged for Dublin Airport, have important implications for Fingal's economic strategy'.* The FCDP has therefore included a number of objectives specifically related to Dublin Airport, with the following objective being considered of specific relevance to the proposed Project:

> ***Objective ED31:*** *Ensure that the required infrastructure and facilities are provided at Dublin Airport so that the aviation sector can develop further and operate to its maximum sustainable potential, whilst taking into account the impact on local residential areas, and any negative impact such proposed developments may have on the sustainability of similar existing developments in the surrounding area, and the impact on the environment, including the climate.*

As a further important aspect of the national economy, and one which has been identified as having potential for growth within Fingal, the marine sector is also highlighted within section 6.11, where it is stated that the county has some of the largest and most valuable fisheries in Europe, whilst also offering "*spectacular tourism and leisure opportunities and a rich maritime culture and heritage".*

Objective ED78 has been formulated to assist in supporting the above, and states that:

> ***Objective ED78:*** *Support the existing diverse nature of the marine sector in Fingal, and identify and promote sustainable growth opportunities, while protecting European sites. This shall be achieved through engagement and partnership with the relevant agencies, sectoral representatives and local communities.*

Similarly to other chapters, LAPs and Masterplans are again advocated (within Section 6.13, Land Use Zonings and Sectoral Building Requirements) to be formulated/

[19] Published by the Department of Transport, Tourism and Sport in August 2015

implemented during the lifetime of the FCDP, in terms of comprising a mechanism to achieve the aims and objectives relating to economic growth and development, with objectives ED88, ED89, and ED90 giving specific effect to these. In this regard, the following proposed LAPs and Masterplans (MP) are considered to be relevant to the consideration of component parts of the proposed Project:

- Cloghran (see Map Sheet 11, LAP 11.B)
- Turnapin (see Map Sheet 11, LAP 11.C)
- Dardistown (See Map Sheet 11, LAP11.D)
- Cherryhound (See Map Sheet 12, LAP12.A)
- Dublin Airport Central Masterplan (See Map Sheet 11, MP 11.A)
- Dubber (See Map Sheet 11, MP 11.B)
- Clonshaugh West (See Map Sheet 11, MP 11.C)
- Clonshaugh East (See Map Sheet 11, MP 11.D)
- Kilshane (See Map Sheet 12, MP 12.A)

Specific mention is also made of the importance of the High Technology (HT) zoning objective to support economic development, with its associated high quality, highly accessible, campus style settings. LAPs and Masterplans are also indicated as being required for such lands. In respect of its relevance to the proposed Project, these include the Council's intention that Masterplans are prepared for HT zoned lands at Clonshaugh, ie at:

- Clonshaugh West (See Map Sheet 11, MP 11.C)
- Clonshaugh East (See Map Sheet 11, MP 11.D)
- Dublin Airport Central Masterplan (See Sheet 11, MP 11.A)

The above is supported through the following objective:

> ***Objective ED94:*** *Prepare LAP's and Masterplans within the lifetime of the Development Plan for strategically important High Technology zoned lands in collaboration with key stakeholders, relevant agencies and sectoral representatives.*

Project Response:
The proposed Project will support the County's economic vision, and be in compliance with the relevant economic objectives as highlighted above. Its component parts have been designed to integrate and maximise as far as possible, on existing infrastructure, whilst providing additional capacity, in a strategic and economically beneficial manner for all.

The proposed Project will be strategically located in order to ensure a maximum benefit to existing zoned lands. The proposed Project will assist in servicing these lands and areas, and it will provide the required enabling waste water infrastructure and servicing for these[20].

[20] Chapter 3, EIAR: "*In the absence of the implementation of the above proposed drainage strategy the SEA considered that inadequate wastewater treatment and drainage management would result in development constraints within the area covered by the strategy. Thus, Local Authorities (LAs)*

The proposed Project has also been specifically designed to include provision for the future growth projections of Dublin Airport (and associated lands). In this regard-, the design of the proposed Project has been informed by the Assessment of Domestic and Non-Domestic Loads on Proposed Regional WwTP (Jacobs Tobin Dec '17 – see appendix to Chapter 3 (Project Need) of the EIAR). As such it will support DAA by providing additional pipeline and wastewater treatment capacity and sufficient headroom, in accordance with Objective ED31, and will assist Fingal County Council in respect of the delivery of their Main Aims and strategic policy, as express within the FCDP, and as associated with Dublin Airport.

As is noted within the EIAR and the NIS, the proposed Project will not negatively impact any designated European site, and will therefore similarly not negatively impact the marine sector within Fingal.

The proposed Project has evolved and developed, in consultation with a number and variety of stakeholders, including Fingal County Council, in accordance with Objective ED78, as well as those associated with the preparation of LAPs and Masterplans. The non-statutory public consultation process is also outlined within the RPS report titled *Public Stakeholder Participation Report.* Realisation of the Project will ensure that the required enabling pipeline capacity and wastewater treatment infrastructure and facilities are in place, in an appropriate and timely manner in order to service zoned areas. The proposed Project will also provide for much needed headroom in wastewater infrastructure. This will assist in ensuring sustainable and proper growth and development (environmentally and economically) within the specific areas and lands.

4.1.6 CHAPTER 7 – MOVEMENT AND INFRASTRUCTURE

Chapter 7 of the FCDP aims to establish the framework for a safe, efficient, effective and sustainable transportation strategy and policies for Fingal.

Within the context of roads, it is pointed out that for new developments, *'access onto the road network is a key issue',* and *"'where new entrances are necessary, the relevant road design standards will be applied (DMRB in rural situations ie. the NRA Design Manual for Roads and Bridges - and DMURS in urban situations – Design Manual for Urban Roads and Streets).*

A number of Road Improvement Schemes are highlighted within the FCDP at Table 7.1, with Objective MT41 being provided to give effect to these. Of note and relevance to the proposed Project, is the Road Scheme associated with the East-West Distributor Road: Malahide Road to Stockhole Lane.

> ***Objective MT41:*** *Seek to implement the Road Improvement Schemes indicated in Table 7.1 within the Plan period, subject to assessment against the criteria set out in Section 5.8.3 of the NTA Transport Strategy for the GDA, where appropriate*

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would be inhibited from effectively implementing their respective County and City Development Plans".

and where resources permit. Reserve the corridors of the proposed road improvements free of development.

The FCDP also notes that large new developments can generate additional car and HGV traffic, and objective MT36 specifically seeks to ensure that development does not cause significant additional congestion on the County's road network.

> ***Objective MT36:*** *Maintain and protect the safety, capacity and efficiency of National roads and associated junctions in accordance with the Spatial Planning and National Roads Guidelines for Planning Authorities, DECLG, (2012), the Trans-European Networks (TEN-T) Regulations and with regard to other policy documents, as required.*

A number of other objectives are outlined within this chapter that are associated with Dublin Airport, which, whilst not directly relevant to the consideration of the proposed GDD Project as a development proposal, do assist in demonstrating the suitability of the proposed Project and its associated use and facilities, within the locations proposed, especially in respect of the proposed WwTP and the RBSF. These objectives are listed below, and comprise:

> ***Objective DA10:*** *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 DA13:*** *Promote appropriate land use patterns in the vicinity of the flight paths serving the Airport, having regard to the precautionary principle, based on existing and anticipated environmental and safety impacts of aircraft movements.*

> ***Objective DA18:*** *Ensure that every development proposal in the environs of the Airport takes account of the current and predicted changes in air quality, greenhouse emissions and local environmental conditions.*

> ***Objective DA19:*** *Ensure that every development proposal in the environs of the Airport takes into account the impact on water quality, water based-habitats and flooding of local streams and rivers and to provide mitigation of any negative impacts through avoidance or design and ensure compliance with the Eastern River Basin District Management Plan.*

The matter of water services, including waste and wastewater, are also included within this chapter. These have been highlighted previously within this Planning Report at Section 3.4 (Local Policy Context), and are therefore not further elaborated upon within this section. The chapter also makes reference (and includes an objective – MT44), to the provisions of Section 48 and 49 ('special' development contribution levies) of the Planning and Development Act (as amended). The issue of development contributions is also addressed in more detail within this Planning Report at section 4.3.

A number of other objectives associated with movement and the provision of infrastructure are also outlined within the FCDP. Those considered of relevance to the GDD Project proposal are copied below, and are highlighted as being relevant to aspects

relating to flooding (SW04); climate change (CC01 and CC02); energy efficient design (EN04); renewable energy (EN06 and EN09), and bioenergy (EN18).

> ***Objective SW04:*** *Require the use of sustainable drainage systems (SuDS) to minimise and limit the extent of hard surfacing and paving and require the use of sustainable drainage techniques where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risks.*
>
> ***Objective CC01:*** *Comply with the recommendations of the GDSDS Climate Change Policy with regard to the provision and management of drainage services in the County and recognise that climate mitigation and adaption measures are evolving and comply with new national measures as presented in National Plans and Frameworks.*
>
> ***Objective CC02:*** *Implement the specific recommendations of Table CC1 of the GDSDS Regional Policy Volume 5 Climate Change Policy for all housing, commercial and industrial developments within the County.*
>
> ***Objective CC04:*** *Mitigate the causes of climate change as per COP21 also known as the 2015 Paris Climate Conference.*
>
> ***Objective EN04:*** *Encourage development 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 EN06:*** *Encourage and facilitate the development of renewable energy sources, optimising opportunities for the incorporation of renewable energy in large scale commercial and residential development.*
>
> ***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.*
>
> ***Objective EN18:*** *Support Ireland's renewable energy commitments outlined in national policy by facilitating the exploitation of biomass technology energy while ensuring that a balance is met that such development does not have a negative impact on the surrounding environment, landscape, biodiversity or local amenities, nor on the environment nor food production elsewhere either directly or through indirect land use change.*

Matters relating to air quality and light and noise pollution, are also highlighted with the acknowledgement being provided that "*these are primarily addressed within legislation associated with each*". Notwithstanding, a number of objectives are also outlined, specific to these issues, and the need to minimise the 'pollution' associated with these - including any negative or adverse impacts to the surrounding area or neighbours. Those relevant to the GDD Project include:

Objective AQ01: *Implement the provisions of EU and National legislation on air, light and noise and other relevant legislative requirements, as appropriate and in conjunction with all relevant stakeholders.*

Objective LP01: *Require that the design of lighting schemes minimises the incidence of light spillage or pollution into the surrounding environment. New schemes shall ensure that there is no unacceptable adverse impact on neighbouring residential or nearby properties; visual amenity and biodiversity in the surrounding areas.*

Objective LP02: *Establish a hierarchy of light intensities on lands that are subject to Local Area Plans, Masterplans and larger tracts of lands subject to comprehensive developments in order to ensure that environmental impacts are minimised as far as possible through the designation of Environmental Zones.*

Dublin Airport is again considered within this Chapter, especially in respect of its impact on proposed development with regard to noise and aircraft safety. It is highlighted that *"two noise zones are shown in the Development Plan 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.* These provisions are reiterated and supported within objectives DA07 and DA10, which might be considered to apply to the proposed GDD Project, whilst DA13, DA15 and DA16 are considered applicable in respect of aircraft safety.

Objective DA07: *Strictly control inappropriate development and require noise insulation where appropriate within the Outer Noise Zone, and actively resist new provision for residential development and other noise sensitive uses within the Inner Noise Zone, as shown on the Development Plan maps, while recognising the housing needs of established families farming in the zone. To accept that time based operational restrictions on usage of a second runway are not unreasonable to minimize the adverse impact of noise on existing housing within the inner and outer noise zone.*

Objective DA10: *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 DA13: *Promote appropriate land use patterns in the vicinity of the flight paths serving the Airport, having regard to the precautionary principle, based on existing and anticipated environmental and safety impacts of aircraft movements.*

Objective DA15
Take into account relevant publications issued by the Irish Aviation Authority in respect of the operations of and development in and around Dublin Airport.

Objective DA16
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.

Project Response:
As has been previously highlighted (Section 4.1.3 Chapter 3 – Placemaking, Project Response), Irish Water is committed to designing, building and operating assets to ensure energy efficiency. Chapter 4 of the EIAR notes that the plant, equipment, buildings and systems associated with this project will be designed, equipped, operated and maintained in such a manner as to ensure a high level of energy performance and that energy is used efficiently. The implementation of this proposed Project will be designed following the requirements set out in IS 399 Energy Efficient Design and Management. This standard requires that any design features or methods that may reduce energy consumption are considered, and the process of their consideration is clearly documented.

Chapter 4 of the EIAR also highlights the fact that the Energy Performance of Buildings Directive (EPBD) requires Near Zero Energy Buildings (NZEB) by 2020 and significantly increases the amount of onsite renewable energy used in buildings. This requires consideration in the lifecycle assessment and embodied carbon calculation. It will be relevant to all buildings constructed as part of this project. The detail design will account for this, and will also follow SEAI guidelines, including development of energy balances, determination of the minimum achievable energy performance indicator (EnPi) for the design, energy Benchmarks, energy variables for the design that quantify variables that impact energy performance, and preparation of Measurement and Verification (M&V) Plans to detail how the energy performance of the design will be measured and verified as per ISO5 0015.

The proposed Project design evolution has considered a number of renewable technologies in order to reduce the carbon footprint of the site. Installation of wind turbines on the WwTP site were considered for this project but were not deemed practical following concerns raised by Dublin Airport Authority (DAA) that the turbines might cause interference with electronic components, including radar and landing controls. In addition, consideration was also given to the installation of a turbine in the outfall pipe, however due to the distance between the WwTP and the outfall location, the electrical losses across this distance would produce negligible energy.

Notwithstanding, the proposed Project proposes to maximise energy recovery from the WwTP and sludge treatment processes. This will be achieved using thermal hydrolysis and anaerobic digestion in the treatment of the sludge and using the bio-gas produced from this process to fuel onsite Combined Heat & Power (CHP) generators to produce electrical and thermal energy. This is highlighted within section 4.9.2 within Chapter 4 of the EIAR. Primary and secondary sludge produced by the WwTP can be mixed with the sludge imported to the Sludge Hub Centre (SHC) prior to undergoing the treatment process. Use of thermal hydrolysis with anaerobic digestion will reduce the dry matter and increase production of biogas.

A well-designed CHP system will produce power at a cost below that of retail electricity, will reduce the overall energy consumption of the plant and reduce emissions of greenhouse gases. Typical CHP systems can have total efficiencies of up to 80%.

In the above context, the proposed Project has therefore considered the impacts of climate change through the proposed use of energy saving and efficiency measures.

As has already been outlined within this report (Section 2.1.1), the proposed east-west distributor road will comprise the southern boundary of the proposed WwTP and Sludge

Hub Centre at Clonshagh. This road will also act as an appropriate additional 'buffer' between the site's use and any future proposed uses within the HT zoned lands to the south of the road. Chapter 13 (Traffic and Transport) assesses the potential effects of the proposed Project on the local traffic and transport network during the Construction and Operational phases. The traffic study findings incorporated within Chapter 13 for the Construction and Operational phases of the proposed Project, highlight the fact that the proposed Project will not impact the safety, capacity and efficiency of National roads and associated junctions, aside from some construction related impacts – with construction related impacts being regarded as minor, and operational phase construction impacts being considered negligible.

In order to minimise the impact of the Construction Phase on the surrounding road network therefore, mitigation measures are included in the Construction Traffic Management Plan (CTMP), and are also described in Chapter 13 (Traffic and Transport) of the EIAR. These include a detailed construction programme, the scheduling of deliveries of materials to site outside of peak times, visual monitoring of any roads used by construction traffic and the management of site entrances to omit the risk of Heavy Goods Vehicles (HGVs) queues onto the public road network.

The underground and low-lying nature associated with the uses, infrastructure and facilities proposed as part of the proposed Project will not give rise to conflicts with aircraft movements, and are considered an appropriate, compatible land use which would not be regarded as a sensitive noise receptor. They are also not likely to comprise any likely other anticipated environmental and safety impacts of aircraft movements.

In considering noise impacts associated with the Airport, as has been previously highlighted neither the proposed WwTP and sludge hub centre (nor in fact the entire proposed Project), are noise sensitive uses, and as such, no impacts will arise in this instance. All lighting provided, shall be done so in accordance with the FCDP development standards, and any other associated legislation, standards and guidelines. All aspects relating to noise are dealt with in Chapter 15 of the EIAR.

In addition to the above, odour and noise limits will be in compliance with EPA regulations and conditions, and all site lighting will be designed to minimise spill. The proposed Project design also incorporates the provision of an Odour Control Unit (OCU) at Dubber. The OCU will extract air from the initial section of the gravity sewer and pass it through the OCU prior to venting to atmosphere.

Also in relation to odours, and as highlighted previously within this Planning Report, with regards to 'buffers' relative to odour producing units, the closest building to the Abbotstown pumping station is the St. Francis Hospice which is located c. 200m away. In addition, a feature of the Alternative Site Assessment is the implementation of a 300m buffer from any existing receptors – this is substantially in excess of the 100m buffer sought through Objective WM11. In regard to the proposed site layout itself, this incorporates a 'green' buffer to the west, north and east of the proposed Project which varies in width between 60-120m. This buffer, together with the proposed extensive landscaping, will ensure that a minimum of 100m is maintained between any odour producing elements of the proposed Project, as well as a "*consistency with the character of the landscape with the Greenbelt"*, and will integrate and screen the proposed WwTP and Sludge Hub Centre within the area. To the south of the proposed Project, a campus-style landscaped edge, coterminous with the road, and the width of

the road itself, will act as the proposed Project buffer in this direction.

As regards DA18 and DA19 (air, noise and water impacts within the vicinity of the airport), both a FRA & EIA have been undertaken. These assessments all demonstrate that the proposed Project has no impact (refer to FRA (Chapter 7 Hydrology & Hydrogeology) of the EIAR, Appendix 1), and Chapters 14 (Air) and 15 (Noise) of the EIAR). As has been highlighted (and as indicated within Landscape Plan drawings, SuDS will be incorporated at the Abbotstown Pumping Station site and the WwTP site.

To reiterate, climate change has been considered in the design of the outfall pipe through the consideration of higher sea levels. As future development land will not be discharging surface water to the proposed Project, climate change has no impact here. In addition to the above, the proposed Project facilitates energy recovery through the use of 'bio-gas', and energy efficiency measures will be promoted through the specification of energy efficient pumps, motors, etc. at tender stage of the proposed Project.

The proposed Project has been designed to take account of, and include provisions for projected growth associated with the Airport (refer to the Assessment of Domestic and non-domestic load on the proposed Regional WwTP), as well as the relevant EU and national legislation in respect of air, light and noise etc (refer to Chapters 14 (Air) and 15 (Noise).

The WwTP and sludge hub centre site is partially located within the Dublin Airport Red Approach Area. While the entire site is situated in the Outer Public Safety Zone, it is just south of the Inner Public Safety Zone. The site is substantially located within the Outer Noise Zone of Dublin Airport, while a small portion of the lands to the north of the site are located within the Inner Noise Zone.

The proposed development of the WwTP comprises relatively low-rise, fully enclosed treatment tanks and associated buildings of a maximum height of 18 metres. The proposed Project will thus have no impact on the safety and navigation of aircraft associated with Dublin Airport, and is in compliance with the requirements of the IAA. Discussions have been ongoing between the Applicant and the IAA throughout the design stages of this scheme. Any requirements of the IAA in relation to the proposed Project will be taken into account in implementing the proposed Project, if approved.

4.1.7 CHAPTER 8 – GREEN INFRASTRUCTURE

Chapter 8, Green Infrastructure, identifies a key challenge for Fingal as being to "*manage growth so that the County's agricultural production capacity is maintained as urban expansion continues and in a way which protects the County's natural and cultural resources for the future*". The Council has identified and mapped key elements of the County's strategic green infrastructure on the FCDP maps under five key Green Infrastructure (GI) themes – Biodiversity; Parks, Open Space and Recreation; Sustainable Water Management; Archaeological and Architectural Heritage; and Landscape.

Key proposals for the management of existing green infrastructure and the provision of new green infrastructure as part of the FCDP, are highlighted in a number of objectives.

Those considered relevant to the proposed Project, are identified as comprising the following:

> ***Objective GI08:*** *Integrate the provision of green infrastructure with infrastructure provision and replacement, including walking and cycling routes, as appropriate, while protecting biodiversity and other landscape resources.*
>
> ***Objective GI20:*** *Require all new development to contribute to the protection and enhancement of existing green infrastructure and the delivery of new green infrastructure, as appropriate.*
>
> ***Objective GI21:*** *Require all new development to address the protection and provision of green infrastructure for the five GI themes set out in the Development Plan (Biodiversity, Parks, Open Space and Recreation, Sustainable Water Management, Archaeological and Architectural Heritage, and Landscape) in a coherent and integrated manner.*
>
> ***Objective GI22:*** *Require all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres to submit a Green Infrastructure Plan as an integral part of a planning application.*
>
> ***Objective GI24:*** *Ensure biodiversity conservation and/or enhancement measures, as appropriate, are included in all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres.*
>
> ***Objective GI25:*** *Integrate provision for biodiversity with public open space provision and sustainable water management measures (including SuDS) where possible and appropriate.*
>
> ***Objective GI28:*** *Provide attractive and safe routes linking key green space sites, parks and open spaces and other foci such as cultural sites and heritage assets as an integral part of new green infrastructure provision, where appropriate and feasible.*
>
> ***Objective GI33:*** *Seek the provision of green roofs and green walls as an integrated part of Sustainable Drainage Systems (SuDS) and which provide benefits for biodiversity, wherever possible.*
>
> ***Objective GI34:*** *Ensure, wherever possible and appropriate, that elements of the archaeological and architectural heritage are fully integrated into proposals for new developments at the project design stage.*
>
> ***Objective GI36:*** *Ensure green infrastructure provision responds to and reflects landscape character including historic landscape character, conserving, enhancing and augmenting the existing landscapes and townscapes of Fingal which contribute to a distinctive sense of place.*

Project Response:
As is highlighted in the Green Infrastructure Plan attached as Appendix 2, the EIAR sets out how each of the five themes identified and set out in Objective GI121 of the FCDP

has been addressed in the proposed Project *"as part of the scheme design and mitigation measures",* and provides a table (Table 3.1) which cross references these. The GI Plan also outlines GI considerations as they have related specifically to the WwTP and Sludge Hub Centre site as the primary focus of the GI response, as "*it represents the most visible permanent aspect of the proposed Project and has the potential to make the largest contribution to green infrastructure".* Measures proposed for the RBSF are collated separately in Volume 4A of the EIAR.

The proposed Project will ensure that existing environmental, and associated biodiversity risk posed by the lack of existing capacity within existing wastewater treatment plants and associate infrastructure, will be mitigated.

The EIAR demonstrates that the proposed Project will not have an impact on Archaeological or Architectural Heritage. It also highlights the fact that whilst there may be some impact on the landscape, this will be temporary in nature.

As the bulk of the proposed Project will be underground and it is proposed to reinstate ground to its prior condition, any landscape impacts will be limited to the above-ground elements of the proposed Project – i.e. the regional wastewater treatment plant and sludge hub centre, a pumping station, odour control unit, and the Regional Biosolids Storage Facility. As has already been previously highlighted, the proposed Project includes provision for SuDS at both the Abbotstown Pump Station site and the WwTP site. SUDS provision will incorporate a mix of rainwater harvesting, swales, infiltration trenches and permeable pavement, all of which will assist in providing benefits to biodiversity levels.

A detailed Landscape Plan(s)/ Masterplan(s) for the Project, as required by the FCDP, details a network of green spaces and extensive planting proposed to conserve and enhance the ecosystems on sites. In addition, the alignment of the compound adjacent to the Coast Road has been adjusted, in consultation with Fingal County Council, to better facilitate the proposed Fingal County Council cycleway objective. Chapter 12 (Landscape and Visual) of the EIAR and the Green Infrastructure Plan outline the measures in place for enhancement and protection of biodiversity within the GDD Project 'site'. The proposed Project seeks to improve on the current levels of biodiversity and contribute to the enhancement of the green infrastructure network through the provision of planting species/ hedgerows which would encourage and facilitate improved biodiversity. Existing treelines and hedgerows have been identified on the site and protection and enhancement measures provided where relevant. Where tree or hedgerow removal may be required in areas not previously identified, liaison with an ecologist will be required.

The proposed construction methodology includes provision for crossing rivers by means of underground tunnels. This will ensure that any impact to existing rivers is avoided. The proposed tunnelling process to be employed during construction and the reinstatement of all lands above ground to their original state, as part of the development works, will ensure that there will be minimal impact on land use above ground level. Reinstatement works and planting will also ensure that previous levels of biodiversity can become re-established as soon as possible, and adherence to the proposed Construction and Environment Management Plan and the Surface Water Management Plan will ensure that the environmental and ecological quality and integrity of designated sites, watercourses and coastal waters, is maintained.

4.1.8 CHAPTER 9 – NATURAL HERITAGE

Fingal's natural heritage is noted as comprising a core component of the County's Green Infrastructure (GI), with the Council's approach to GI being one that "*seeks to conserve and enhance biodiversity and geological heritage and to promote the sustainable management of the landscape and coast*."

Biodiversity

In the above regard, the FCDP notes that development proposals should include measures to protect and enhance biodiversity, and specifies that this will be achieved through application of the Development Management Standards as outlined within Chapter 12 (Section 12.12 Natural Heritage).

Objectives considered to be of relevance to the proposed Project, include:

> ***Objective NH02:*** *Integrate provision for biodiversity with public open space provision and sustainable water management measures (including SuDS) where possible and appropriate.*
>
> ***Objective NH07:*** *Actively support the aims and objectives of the All Ireland Pollinator Plan 2015-2020 by encouraging bee keeping and other measures to protect and increase the population of bees and other pollinating insects in Fingal.*
>
> ***Objective NH13:*** *Ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are or were previously present, the applicants will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations 2011 (S.I. 477/2011).*

In addition to the above, the FCDP also refers to the *Fingal Biodiversity Action Plan* which sets out the Council's objectives for biodiversity conservation for the next 20 years. Within this action plan, the spatial framework (Fingal Ecological Network) for biodiversity conservation and management is set out, and comprises the following elements (these are also incorporated in the Green Infrastructure Maps):

- **"***Core Biodiversity Conservation Sites,*
- *Ecological Buffer Zones,*
- *Nature Development Areas,*
- *Ecological Corridors and Stepping Stones including Trees and Hedgerows".*

Core biodiversity conservation areas are noted as being the most important nature conservation sites, and include sites designated internationally (EU) and nationally in Annex 1 of the *Habitats Directive*, as well as sites that host rare and important species and their habitats.

Due to the location of the works and component parts of the proposed Project in respect of these areas, a number of objectives are highlighted below which are considered pertinent:

> ***Objective NH15:*** *Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e. Special Areas of Conservation (SACs) and Special*

Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the period of this Plan.

Objective NH16: *Protect the ecological integrity of proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, and Habitat Directive Annex I sites.*

Objective NH17: *Ensure that development does not have a significant adverse impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, and on rare and threatened species including those protected by law and their habitats.*

Table 4.1 below lists those European Sites within the proposed Project corridor area that may be potentially affected by the proposed Project.

Ref No.	Site Name	Desig-nation Type	Site Code	Approximate Location Relative to Proposed Works	Potential Pathways for LSEs
1	Baldoyle Bay	SAC	000119	Marine outfall passes through this SAC	• Hydrological (water quality and habitat deterioration) • Underwater noise and disturbance • Habitat loss
2	Baldoyle Bay	SPA	004016	Marine outfall passes through this SPA	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
3	Rockabill to Dalkey Island	SAC	003000	A 1,300m section of the marine outfall and diffuser are located in this SAC	• Hydrological (water quality and habitat deterioration) • Underwater noise and disturbance • Habitat loss
4	Ireland's Eye	SAC	002193	1.0km south of the marine outfall	Designated for coastal and not marine habitats. There is no hydrological link and no open pathway of effect, thus there is no real possibility of LSEs.
5	Ireland's Eye	SPA	004117	0.4km southwest of the marine outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
6	North Dublin Bay	SAC	000206	2.3km to the south of the marine outfall	• Hydrological (water quality and habitat deterioration)
7	North Bull Island	SPA	004006	2.3km to the south of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss

Ref No.	Site Name	Desig-nation Type	Site Code	Approximate Location Relative to Proposed Works	Potential Pathways for LSEs
8	Malahide Estuary[21]	SPA	004025	2.5km to the north of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
9	Malahide Estuary	SAC	000205	2.5km north of the marine outfall	• Hydrological (water quality and habitat deterioration)
10	Howth Head Coast	SPA	004113	2.6km to the south of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
11	Howth Head	SAC	000202	2.6km to the south of the marine outfall	Designated for coastal terrestrial habitats. There is no hydrological link and no open pathway of effect, thus there is no likelihood of significant effects.
12	South Dublin Bay and River Tolka Estuary	SPA	004024	7.6km south of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
13	Rogersto wn Estuary	SAC	000208	8.5km north of the marine outfall	Hydrological (water quality and habitat deterioration)
14	Rogersto wn Estuary	SPA	004015	8.5km north of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
15	South Dublin Bay	SAC	000210	9.1km to the south of the Marine Outfall	• Hydrological (water quality and habitat deterioration)
16	Lambay Island	SAC	000204	9.3km north-east of the marine outfall	• Hydrological (water quality and habitat deterioration) • Underwater noise and disturbance
17	Lambay Island	SPA	004069	9.3km north-east of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
18	Dalkey Island	SPA	004172	14.9km south of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss

[21] NPWS also refer to this as Broadmeadows / Swords Estuary SPA.

Ref No.	Site Name	Desig-nation Type	Site Code	Approximate Location Relative to Proposed Works	Potential Pathways for LSEs
19	Skerries Islands	SPA	004122	16.7km to the north of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
20	Rockabill	SPA	004014	16.9km to the north of the Marine Outfall	• Hydrological (water quality and habitat deterioration) • Airborne noise and visual disturbance • Habitat Loss
21	Glenasmole Valley	SAC	001209	14.8km south of the project	This SAC is situated 14.8km south of the Orbital Sewer. It is considered that there is no potential for effects on this site as no connecting pathways, e.g. streams or rivers) potentially lie within the zone of influence
22	Rye Water Valley/Carton	SAC	001398	8.7km to the west of the project	This SAC is situated 8.7km to the west of the Orbital Sewer. It is considered that there is no potential for effects on this site as no connecting pathways, e.g. streams or rivers) potentially lie within the zone of influence

Table 4.1 Protected Areas of International and National Importance[22]

Ecological Buffer Zones

In terms of the Council's GI strategy, it is clear from the GI maps provided that Baldoyle Estuary is included as an ecological buffer zone, in order to "*protect the ecological integrity of the nationally and internationally designated sites by providing suitable habitat for key species such as birds, by providing for compatible land uses around the designated sites, and in the case of the freshwater wetland areas, by ensuring a steady supply of clean groundwater and surface water*".

The FCDP notes that in respect of such zones, the Council will normally only grant permission where it is clearly demonstrated that a proposal will have no significant adverse impact on the habitats and species of interest in the buffer zone and its ecological functions, and that *"Proposals for development in these areas will require AA because of their close proximity to Natura 2000 sites*". Objective NH18 supports the above provisions, and is copied below.

> ***Objective NH18:*** *Protect the functions of the ecological buffer zones and ensure proposals for development have no significant adverse impact on the habitats and species of interest located therein.*

[22] The sites shaded in grey within Table 4.1 have no potential pathway for impact and as such were not considered further in the screening assessment.

Nature Development Areas

Nature Development Areas which have been identified by the Council, are considered to be locations, or "*reservoirs of biodiversity in the wider countryside*", where nature conservation can be combined with existing activities (eg. farming, forestry, recreation). In relation to planning applications, the Council require that development proposals demonstrate how the proposed development "*will maintain and enhance the biodiversity value of the site*". Specific objectives relating to such areas (eg the Abbotstown Pumping Station site), include:

> ***Objective NH20:*** *Maintain and/or enhance the biodiversity of the Nature Development Areas indicated on the Green Infrastructure maps.*

Ecological Corridors and Stepping Stones Including Trees and Hedgerows

The FCDP describes ecological corridors as "*linear landscape features such as rivers, hedgerows and road verges that enhance the movement of wildlife through the landscape*", with stepping stones comprising "*a series of smaller landscape features such as small woodlands, areas of scrub, wet grassland and marshes*". The Council outline a number of requirements for development proposals, specifically that they:

- have to clearly demonstrate that they will not adversely affect the habitats and/ or species of interest in the corridor or stepping stone;
- should seek to enhance the ecological value of the corridor/ stepping stone as an integral part of the development proposal;
- may require an ecological assessment where a significant impact on habitats or species of interest within the corridor/ stepping stone, is likely to occur.

The following associated objectives are identified as being of relevance to the Proposed Project:

> ***Objective NH23:*** *Protect the ecological functions and integrity of the corridors indicated on the Development Plan Green Infrastructure Maps.*
>
> ***Objective NH24:*** *Protect rivers, streams and other watercourses and maintain them in an open state capable of providing suitable habitat for fauna and flora, including fish.*
>
> ***Objective NH27:*** *Protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management.*

County Geological Sites

As regards County Geological sites, the proposed Project does not impact any of the 21 County Geological Sites identified by the Geological Survey of Ireland (GSI), and listed within Table GH01 of the FCDP. Notwithstanding, as the proposed outfall pipeline, will pass in relative close proximity (1km) to Ireland's Eye which is identified as an important geological heritage site, the provisions and objectives relating to such sites have also been noted and responded to.

General FCDP provisions entail that the Council will seek to maintain and where possible enhance the geological heritage of such sites, and provide access to them where possible and appropriate, and also that the Council will consult the Geological Survey of Ireland

when considering undertaking, approving or authorising developments which are likely to affect County Geological Sites.

> ***Objective NH30:*** *Protect and enhance the geological and geomorphological heritage of the County Geological Sites listed in Table GH01 and indicated on Green Infrastructure Maps.*

Landscape

Managing the rapid rate of change within the county, as a result of high rates of economic and population growth, and the resultant impacts within the landscape, is identified within the FCDP as a challenge – especially in terms of managing the county's landscapes so that change is positive in it effects.

The FCDP's Landscape Character Assessment (LCA), which identifies six different landscape types within the county, assigns a value to each, ranging from exceptional to low. The sensitivity of each landscape type is also defined – this is an indication of the 'type's' sensitivity/ ability to sustain its character in the face of change. The stated purpose of the Council's LCA is to "*inform decision making in relation to the protection of the environment, natural resources and heritage*", and guide development.

The County's Landscape Character Types, their Value and Sensitivity, are summarised within Table LC01 of the FCDP, as highlighted herein, below.

Table LC01: Landscape Character Assessment Summary – Character, Value and Sensitivity

Landscape Character Types	Landscape Value	Landscape Sensitivity
Rolling Hills Type	Modest	Medium
High Lying Type	High	High
Low Lying Type	Modest	Low
Estuary Type	Exceptional	High
Coastal Type	Exceptional	High
River Valley and Canal Type	High	High

The following objectives associated with landscape are considered relevant to the proposed Project:

> ***Objective NH33:*** *Ensure the preservation of the uniqueness of a landscape character type by having regard to the character, value and sensitivity of a landscape when determining a planning application.*

> ***Objective NH34:*** *Ensure development reflects and, where possible, reinforces the distinctiveness and sense of place of the landscape character types, including the retention of important features or characteristics, taking into account the various elements which contribute to their distinctiveness such as geology and landform, habitats, scenic quality, settlement pattern, historic heritage, local vernacular heritage, land-use and tranquillity.*

> ***Objective NH36:*** *Ensure that new development does not impinge in any significant way on the character, integrity and distinctiveness of highly sensitive areas and does not detract from the scenic value of the area. New development in highly sensitive areas shall not be permitted if it:*

- *Causes unacceptable visual harm*
- *Introduces incongruous landscape elements*
- *Causes the disturbance or loss of (i) landscape elements that contribute to local distinctiveness, (ii) historic elements that contribute significantly to landscape character and quality such as field or road patterns, (iii) vegetation which is a characteristic of that landscape type and (iv) the visual condition of landscape elements.*

Objective NH37: *Ensure that new development meets high standards of siting and design.*

Objective NH38: *Protect skylines and ridgelines from development.*

Objective NH39: *Require any necessary assessments, including visual impact assessments, to be prepared prior to approving development in highly sensitive areas.*

The Coast

Fingal's coastline is described as the "*single most important natural resource in the County*", and is characterised by high landscape quality, its heritage and amenity values as well as being an important resource for the fishing, leisure and tourism industries. Accordingly, it is highlighted that the coast *"is a vital asset with limited capacity to absorb development*". The FCDP provides further that development proposals in coastal areas, especially those identified on the GI maps as being at risk from coastal erosion, must consider the need for coastal defence, and won't add to the need for any coastal work. Where a proposed development is likely to occur within an area at risk of erosion, "*there will be a presumption against new development unless it can be shown …that the likelihood of coastal erosion over the lifetime of the development is minimal*".

Relevant associated objectives to the proposed GDD Project include:

Objective NH60: *Strictly control the nature and pattern of development within coastal areas and ensure that it is designed and landscaped to the highest standards, and sited appropriately so as not to detract from the visual amenity of the area. Development shall be prohibited where the development poses a significant or potential threat to coastal habitats or features, and/or where the development is likely to result in altered patterns of erosion or deposition elsewhere along the coast.*

Objective NH61: *Prohibit development along the coast outside existing urban areas where such development could not be adequately safeguarded over the lifetime of the development without the need to construct additional coastal defences.*

Objective NH68: *Protect bathing waters, including those listed in the Water Framework Directive Register of Protected Areas for the Eastern River Basin District, at Sutton, Portmarnock, Malahide, Donabate, Portrane, Rush, Loughshinny, Skerries and Balbriggan in order that they meet the required bathing water standards and implement the findings and recommendations of the Quality of Bathing Water in Ireland reports as published.*

The FCDP GI Map 15 illustrates the fact that there are designated Shellfish Waters located to the north of the proposed Project. The FCDP requires, through objective NH69, that the quality of designated shellfish waters off the Fingal coast, are protected.

Project Response:
As required by NH02, and as has been previously responded to in aspects relating to Open Space and the Project Response to GI33 (within Section 4.1.7 Chapter 8 – Green Infrastructure), the proposed Project includes provision for SuDS at both the Abbotstown Pump Station site and the WwTP site. SUDS provision will incorporate a mix of rainwater harvesting, swales, infiltration trenches and permeable pavement, all of which will assist in providing benefits to biodiversity levels.

The proposed landscaping envisaged the use of native species and hedgerows which would also assist in improving and protecting biodiversity habitat in accordance with objective NH07.

In addition to the above and as outlined within the Project Response under 4.1.5 in respect of ED78, Chapter 9 (Marine: Flora and Fauna - Marine Ecology), and Chapter 10 (Marine: Flora and Fauna - Marine Mammals) and the concluding paragraph of the NIS the NIS and the EIAR, highlight the fact that the proposed Project will not negatively impact any designated European site, and will therefore similarly not negatively impact the marine sector within Fingal.

This is assisted by virtue of the fact that the proposed Project does not propose any above ground construction works within the vicinity of designated areas, and avoids impacting the beach by tunnelling underground below the Baldoyle estuary and Portmarnock Peninsula to below the low watermark - therefore no works are required on the beach. Modelling of discharge has also indicated that the proposed Project will have an imperceptible residual impact on the water quality of the coastal waters off Dublin and will not influence any designated bathing waters or blue flag beaches. – Chapter 8 (Marine Water Quality).

The proposed tunnelling process to be employed during construction (as outlined within the Construction and Environmental Management Plan), which will be by traditional 'open-cut' techniques and the reinstatement of all lands above ground to their original state (as close to pre-construction condition as possible), as part of the development works, will also ensure that there will be minimal impact on land use and the landscape above ground level.

Also with regard to objectives NH15, 16, 18, and especially in respect of objective NH17 which is one of the main objectives of the proposed Project, the GDD Project will ensure that existing environmental risk posed by the lack of existing capacity within existing wastewater treatment plants and associate infrastructure, will be mitigated. The NIS for the proposed Project specifically concludes "*beyond reasonable scientific doubt that the proposed Project with the implementation of the prescribed mitigation measures will not give rise to significant impacts either individually or in combination with other plans and projects, in a manner which adversely impacts the integrity of any designated site within the Natura 2000 network".*

Adherence to the proposed Construction and Environment Management Plan and the Surface Water Management Plan will ensure that the environmental and ecological quality and integrity of designated sites, watercourses and coastal waters, is maintained in

accordance with objective NH13.

The operational phase of the proposed Project, will reduce the extent of overflows from existing sewer networks to local water networks and courses, and therefore improve the water quality of these. Assessments and modelling undertaken as part of the proposed Project design, demonstrate that the discharge will still allow receiving waters to achieve their environmental objectives due to the level of treatment being applied to the waste waters (Chapter 8: Marine Water Quality).

With regard to NH30, Ireland's Eye is identified as an important geological site. Any proposed development should ensure that its geological and geomorphological heritage is protected and enhanced. All studies and modelling undertaken for the proposed Project and the associated outfall pipe construction and implementation phase, including discharges, and which will be located c. 1km away, demonstrates that the proposed Project will have no negative impact on this important site (also Chapter 8 of the EIAR).

Aspects relating to landscape are addressed within Chapter 12 (Landscape and Visual) of the Maine EIAR Report for the proposed Project, and Chapter 14 (EIAR for the RBSF).
With regard to the WwTP and Sludge Hub Centre site, as the primary focus in consideration of the fact that represents the most visible permanent aspect of the proposed Project, the project response has been to seek to blend and buffer the site within its surroundings - providing hedgerows within the WwTP site and extensive planting around the perimeter

Whilst the FCDP also contains provisions relating to views and prospects, historic landscape characterisation (HLC), Special, and High Amenity Areas, as the Proposed Project will not affect any designated views or prospects, nor occur within any of the County's HLCs, nor a Special or High Amenity Area (Special Amenity Areas relate to the Special Amenity Orders for Howth and the Liffey Valley whilst High Amenity Areas refers to areas zoned as such which are of high landscape value), these are not considered any further within this Planning Report.

4.1.9 CHAPTER 10 – CULTURAL HERITAGE

Chapter 10 establishes the Council's framework in respect of assisting it to protect, conserve and present the County's "rich cultural heritage while promoting sustainable economic development and the enrichment of the environment". A few of the objectives provided and as pertaining to cultural heritage, specifically relate to infrastructural projects such as the proposed Project. These are identified below as:

> ***Objective CH06:*** *Require that proposals for linear development over one kilometre in length; proposals for development involving ground clearance of more than half a hectare; or developments in proximity to areas with a density of known archaeological monuments and history of discovery; to include an Archaeological Impact Assessment and refer such applications to the relevant Prescribed Bodies.*
>
> ***Objective CH25:*** *Ensure that proposals for large-scale developments and infrastructure projects consider the impacts on the architectural heritage and seek to avoid them. The extent, route, services and signage for such projects should be sited at a distance from Protected Structures, outside the boundaries of historic designed landscapes, and not interrupt specifically designed vistas. Where this is*

not possible the visual impact must be minimised through appropriate mitigation measures such as high-quality design and/or use of screen planting.

Objective CH35: *Require that proposed infrastructural and public utility works within Fingal do not remove historic street furniture such as limestone or granite kerbs, cobblestones, cast-iron post-boxes, water-pumps, milestones and street lighting, except where an exceptional need has been clearly established.*

Objective CH36: *Sensitively design, locate and rationalise modern street furniture and elements such as utility boxes, cables, posts, antenna and signage.*

Project Response:
Chapter 16 of the EIAR assesses the potential impacts on the archaeological, architectural, and cultural heritage associated with the proposed Project. One Area of Archaeological Potential (AAP12) has been identified in the northern section of the proposed WwTP. The proposed WwTP will have a direct, very significant negative impact on this AAP. In respect of this area, a programme of archaeological test trenching will be carried out within each area prior to construction. This includes a more detailed assessment of AAP 12, and will be carried out by an archaeologist under licence to the DoCHG.

Testing will provide information on the nature and extent of any archaeological remains within the proposed Project area, enabling the compilation of a programme of works to ensure the sites are fully preserved by record, in a manner deemed appropriate in agreement with the National Monuments Service of the DoCHG. In addition, a number of mitigation measures are proposed during the construction and remediation phase of the proposed Project.

Overall the remediation and operational phases of the proposed Project are anticipated to have a negligible impact on the archaeological and architectural heritage of the surrounding area. No potential impacts on the cultural heritage resource of the County, within the area comprising the proposed Project, are anticipated, and all works will be carried out in line with development plan policies and objectives, and best available technology and techniques.

4.1.10 CHAPTER 11 – LAND USE ZONING OBJECTIVES

The FCDP land use zoning provisions (Chapter 11) indicate *"the land use objectives for all the lands within the County"* and that "*zoning aspires to promote the orderly development of the County by eliminating potential conflicts between incompatible land uses and to establish an efficient basis for investment in public infrastructure and facilities*. *Zoning policy must also have regard to the strategic policies underlying the Development Plan. These include the principles of sustainable development and of consolidation, the integration of land use and transportation planning, and the maintenance of the quality of life within the County as a whole.*

The *'Note'* provided under the land use table within each separate zoning objective, also makes it clear that "*Uses which are neither 'Permitted in Principle' nor 'Not Permitted' will be assessed in terms of their contribution towards the achievement of the Zoning*

Objective and Vision and their compliance and consistency with the policies and objectives of the Development Plan'.

Given the linear nature of the proposed Project, the various component parts comprising the GDD Project proposal, are all situated within a number of different zoning objectives. This overall context, including the specific zoning objectives relevant, is identified below and in Figure 4.4 thereafter.

The proposed Project will be accommodated within/ alongside lands with the following zoning objectives:

- Green Belt (GB): Protect and provide for greenbelt
- High Technology (HT): Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.
- High Amenity (HA): Protect and enhance high amenity areas.
- Open Space (OS): Preserve and provide for open space and recreational amenities.
- General Employment (GE): Provide opportunities for general enterprise and employment.
- Heavy Industry (HI): Provide for heavy industry – e.g. (RBSF)
- Dublin Airport (DA): Ensure the efficient and effective operation and development of the airport in accordance with an approved Local Area Plan.
- Warehousing & Distribution: (WD) Provide for distribution, warehouse, storage and logistics facilities which require good access to a major road network within a good quality environment.

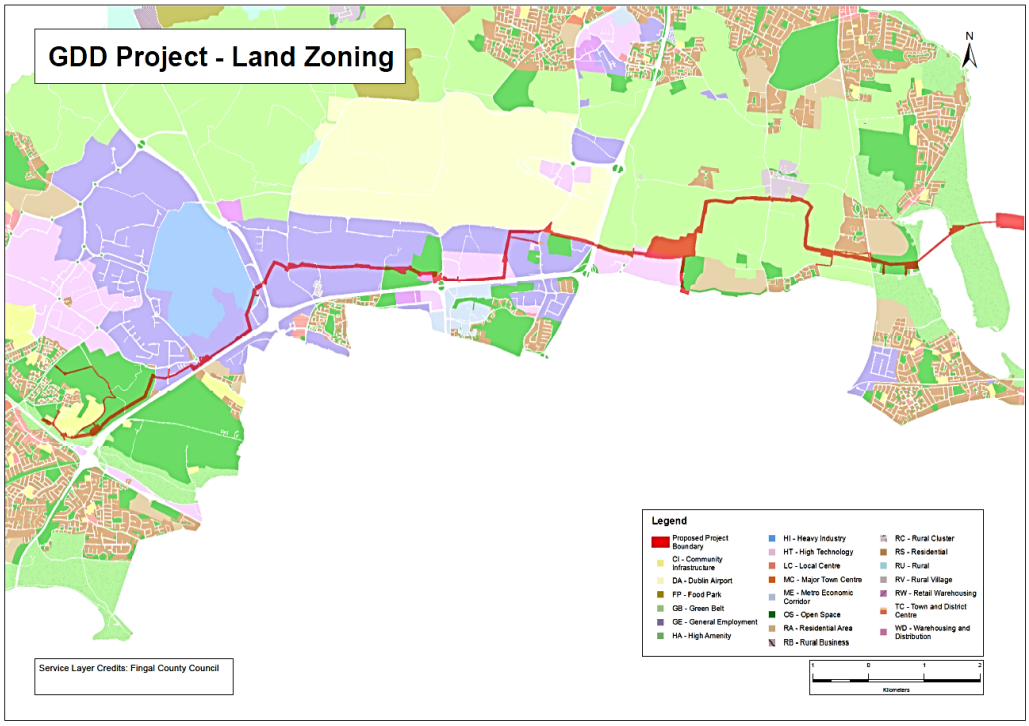
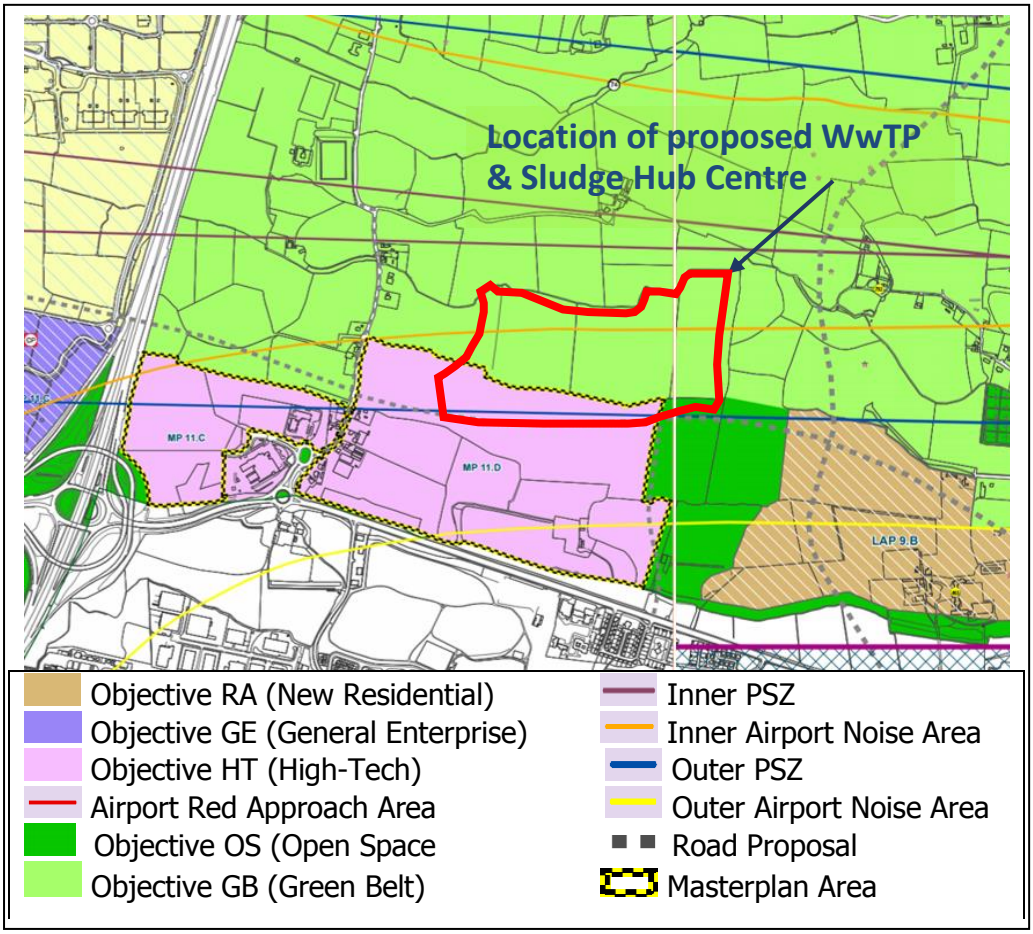


Figure 4.1 GDD Project - Proposed Project Zoning Context (this map is also included at Appendix 1, in A3 format)

4.1.10.1 Proposed WwTP and Sludge Hub Centre

The site of the proposed regional WwTP and Sludge Hub Centre has three different land-use zoning objectives as illustrated below (map to be updated) – specifically, Green Belt (GB); High Technology (HT); and Open Space (OS).



Derived from Sheet 11: South Fringe

Figure 4.2 Zoning Context for Proposed WwTP

Each of these zoning objectives is discussed in turn below.

i. GB – Protect and provide for a Greenbelt

This policy statement forms the basis for three specific Greenbelt objectives (as outlined within Chapter 2, Core Strategy and Settlement Strategy), namely:

SS09 - *Promote development within the Greenbelts which has a demonstrated need for such a location, and which protects and promotes the permanency of the Greenbelt, and the open and rural character of the area.*

SS10 - *Promote public parks, outdoor sports facilities and other recreational uses within the Greenbelts in accordance with the Green Infrastructure Strategy and open space policy.*

SS11 - *Promote opportunities for the enhancement and protection of biodiversity and natural heritage within the Greenbelt.*

The GB zoning objective is the substantive zoning for the WwTP site. The use classes which are listed as 'permitted in principle' and 'not permitted' within Greenbelts, do not include 'wastewater treatment plants' or 'utilities'. They are therefore considered to be 'Open for Consideration'.

Having regard to the above, the FCDP goes on to specify that, *"proposed development within the Greenbelt must clearly demonstrate a functional need for such a location, and consistency with the character of the landscape within the Greenbelt…This will help to promote access to the countryside and assure the permanency of the Greenbelt which is one of its key attributes".*

ii *HT - Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.*

An area of the lands to the south-west of the WwTP site is zoned for High Technology (HT) purposes. The zoning matrix for HT lands confirms that utility installations are 'permitted in principle' under this zoning objective.

The stated vision for HT lands is, "*to facilitate opportunities for high technology, high technology and advanced manufacturing, major office and research and development based employment within high quality, highly accessible, campus style setting. The HT zoning is aimed at providing a location for high end, high quality, value-added businesses and corporate headquarters*…".'

iii OS – Preserve and provide for open space and recreational amenities

A small area of the lands to the south-east of the WwTP site are zoned for Open Space (OS) purposes. The stated vision for such lands is to, *"provide recreational and amenity resources for urban and rural populations subject to strict development controls. Only community facilities and other recreational uses will be considered and encouraged by the Planning Authority".*

The use classes which are 'permitted in principle', and 'not permitted', within OS zoned lands do not include 'wastewater treatment plants' or 'utilities' and they are therefore considered to be "open for consideration".

Project Response:
As can be noted from the above, neither the Green Belt (GB) Zoning, nor the Open Space (OS) Zoning, make provision for the consideration of utility type infrastructural developments, such as that proposed in the subject application, as 'Permitted in Principle'.

The Land Use Classes Technical Guidance Notes for Fingal Development Plan, (Appendix 4), provides definitions for both **Utility Installations** and for **Waste Disposal/ Recovery Facilities (High Impact).** In accordance with these, a Utility Installation is defined as comprising "*A structure composed of one or more pieces of equipment connected to or part of a structure and/ or a facility designed to provide a public utility service such as the provision of heat, electricity, telecommunications, water or sewage disposal and/or treatment*", The proposed Wastewater Treatment Facility is accordingly regarded as comprising such a use(s) – i.e. Utility Installation.

In respect of the Sludge Hub Centre which may potentially be considered a Waste Disposal/ Recovery Facility (High Impact), such uses are defined within the FCDP as comprising "*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 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".*

Whilst it is noted that a 'Waste Disposal and Recovery Facility (High Impact) is listed as comprising a use which is 'Not Permitted' within either the GB, OS or HT zoning objectives, it is however considered that the Sludge Hub comprises a use which is an 'Ancillary Use' to the WwTP. As such, and in accordance with the provisions of the FCDP, such an ancillary use relies on the permitted parent use for their existence and rationale (Section 11.6) – i.e. in this instance, the WwTP. The FCDP provides that such uses "*should be considered on their merits irrespective of what category the ancillary development is listed in the Zoning Objectives, Vision and Use Classes section of this Chapter"* – this is supported by Objective Z06, which states similarly.

In addition to the above it is submitted that public infrastructure projects, such as drainage and rail infrastructure, will inevitably extend across a wide variety of zoned lands as a result of their linear nature. Such infrastructure must be developed on the most suitable undeveloped lands, while balancing considerations such as technical feasibility, cost, existing infrastructure networks, environmental sensitivities/designations and land use zoning. By way of comparison it is noted that the route of the proposed Metro North public infrastructure project, which is also supported by Fingal County Council (Objectives DMS120 and DMS121), extended through Greenbelt zoned lands. Furthermore, the East-West distributor road is identified on the FCDP which, when constructed, will form the southern boundary of the WwTP, site and is to be located in the lands.

Of the three shortlisted sites that arose out of the Alternative Sites Assessment (ASA) process[23], the Clonshagh site was considered 'more favourable' on the basis of it being considered:

- of less ecological value in comparison to the other two alternative sites;
- WwTP design could ensure there would be no impact to existing archaeological remains at the edge of the site;
- The southern marine outfall would be tunnelled under the Baldoyle Bay SAC/SPA, and terminate within the Rockbill to Dalkey Island cSAC. The proposed Project design, construction and operation will ensure that it will not adversely affect the integrity of any Natura 2000 sites;
- Better initial dilution and mixing characteristics for the effluent plume
- Less technical difficulty associated with tunnelling the southern outfall;
- Significantly sorter pipeline length, with associated benefits in respect of:
  - Reduced ecological impact
  - Fewer watercourse crossings
  - Fewer existing (and proposed) key infrastructure crossings
  - Less potential to disrupt the landscape during construction

[23] Reference: ASA Phase 4 Executive Summary, published June 2013

Lower energy requirements

- Less expensive (under preliminary cost estimates, the Clonsgagh site is over €80m less than the other two site options.
- In respect of the co-located Sludge Hub Centre, the Fingal County Council review of the Fingal Sludge Management Plan included the recommendation for the co-location of a sludge hub centre on a future proposed WwTP site. This was subsequently confirmed by Irish Water in the National Sludge Waste Water Management Plan.

The above therefore assists in establishing the functional need for the WwTP and sludge hub centre to be located on this site and within these zoning objectives.

The WwTP itself is proposed to be low-rise, and the site is also proposed to be well landscaped to ensure consistency with the existing landscape, and a 'campus-style' landscape as requested in consultation with Fingal County Council, which would reflect the provisions required of proposed development within High Technology zoned lands. In this respect, Table 12.7 (*'Design Guidelines for Business Parks and Industrial Areas')* has influenced the design of the proposal, due to the proximity of these lands, in accordance with Objective ED112 to "*Encourage better integration of industrial areas into the urban fabric of the County, resolving tensions between uses and enhancing the security and permeability of industrial areas for pedestrians and cyclists as well as businesses".*

The primary objective of the Greenbelt zoning is to demarcate urban and rural areas in order to curb unrestricted sprawl into the countryside. The development of the proposed WwTP and sludge hub centre, on these lands, will not serve to undermine this objective. The specific nature of the development, which is essential public infrastructure, will not set a precedent for additional industrial, commercial or residential development within the Greenbelt.

In recognition of the Greenbelt status of the subject lands and the immediately adjoining lands to the north, west and east, an extensive landscaping plan will be implemented on the site that will serve to integrate and screen the proposed development at this location. In accordance with Objective GI22, which states: "*Require all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres to submit a Green Infrastructure Plan as an integral part of a planning application",* further landscaping detail is included in the Landscape and Visual Impact section of the EIAR (Chapter 12). A Green Infrastructure Plan is also submitted as part of the SID application documentation.

The provision of infrastructure to attract and facilitate such proposed uses and developments as would be proposed within HT zoned lands, is essential. Without it, the developments/ uses may not be able to be implemented. As such, the proposed Project will facilitate the implementation of the strategic vision for these lands.

The need for the proposed Project to facilitate the continued growth and expansion of the GDA within the national economy has been clearly established within the EIAR, and is supported in national, regional and local policy documents, as identified in this Planning Report. In addition, it is a specific objective of Fingal County Council to facilitate and provide for the implementation of the Greater Dublin Regional Drainage Project (Objective WT03).

In the event that ABP consider any aspect of the proposed Project to materially contravene any of the provisions or zoning objectives of the Fingal County Development Plan (2017-2023), it is requested and motivated that ABP consider the application under the provisions of Section 37G(6) of the Planning and Development Act (as amended), on the basis that:

i) The proposed Project is considered to be of strategic and regional importance;
ii) There are conflicting objectives in the FCDP or the objectives are not clearly stated, insofar as the proposed Project is concerned, and that
iii) Permission should be granted having regard to the relevant National and Regional plans and strategies as highlighted and outlined within this Planning Report.

4.1.10.2 Abbotstown Pumping Station

The proposed pumping station at Abbotstown is a single storey structure of 305m^2 and 10m height, and is bound by the lands of the National Sports Campus. The grounds of Connolly Memorial Hospital adjoin the subject site to the south and south-west, while the Tolka Valley is also located to the south.

The site which it is proposed will accommodate the Abbotstown Pumping Station is zoned Open Space (OS), with the objective "*to preserve and provide for open space and recreational amenities*". Land zoned 'High Amenity' is situated to the south of the site.

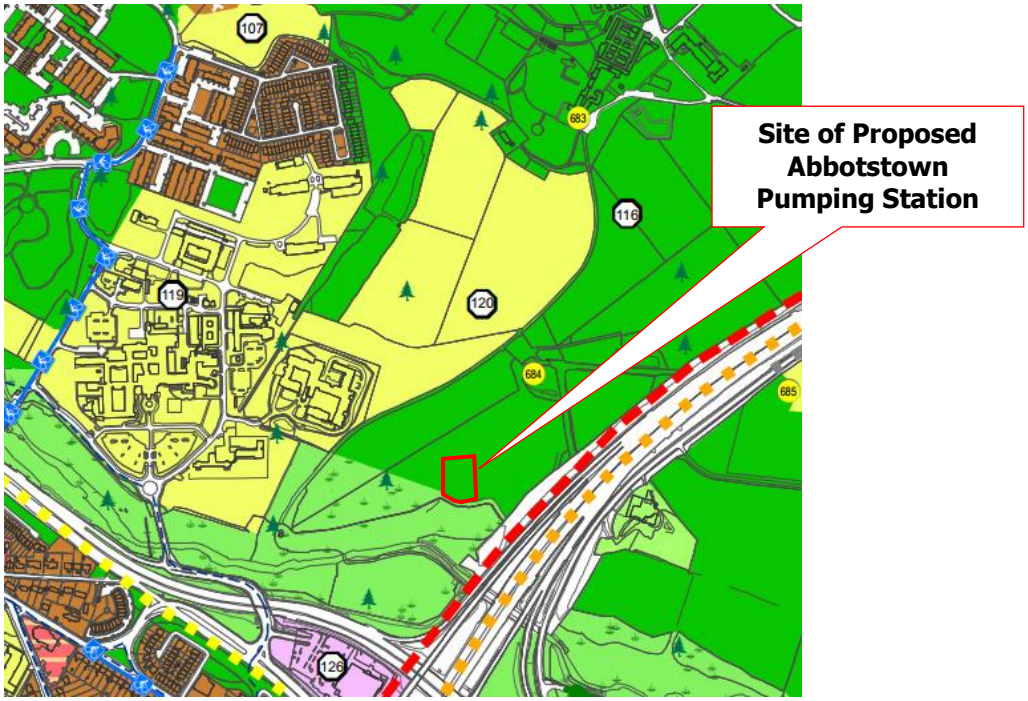


Figure 4.3 Zoning Context for Abbotstown Pumping Station

Within the Open Space (OS) zoning objective, 'wastewater treatment plants' and 'utilities' are not listed as uses which are either 'permitted in principle' or 'Not Permitted'. The pumping station proposed at Abbotstown is therefore considered to be 'Open to Consideration'.

Project Response:

The proposed Abbotstown pumping station is considered to comprise a relatively small, single storey pumping station that has been specifically designed to reflect the architectural character of the adjacent St Francis Hospice. It's scale and design is such that it will have no significant impact on the open space lands at this location, nor the adjoining High Amenity (HA) zoned lands of the Tolka Valley. The proposed development is considered to be in compliance with the strategic policies and objectives of the Fingal Development Plan which specifically support the implementation of the proposed Project.

4.1.10.3 Regional Biosolids Storage Facility (RBSF)

The zoning objective of the site relating to the RBSF is "HI" – with the objective to "*Provide for heavy industry*". The vision relating to such lands is to:

> *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.*

The above-outlined zoning objective permits the following land uses as '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/Café5 Retail - Local < 150 sqm nfa5 Sustainable Energy Installation; Telecommunications Structures; Utility Installations; Waste Disposal and Recovery Facility (High Impact).

In accordance with the land use definitions provided within the FCDP, the RBSF is considered to comprise either a utility installation or a waste disposal and recovery facility, and it's use is therefore considered to be permitted in principle.

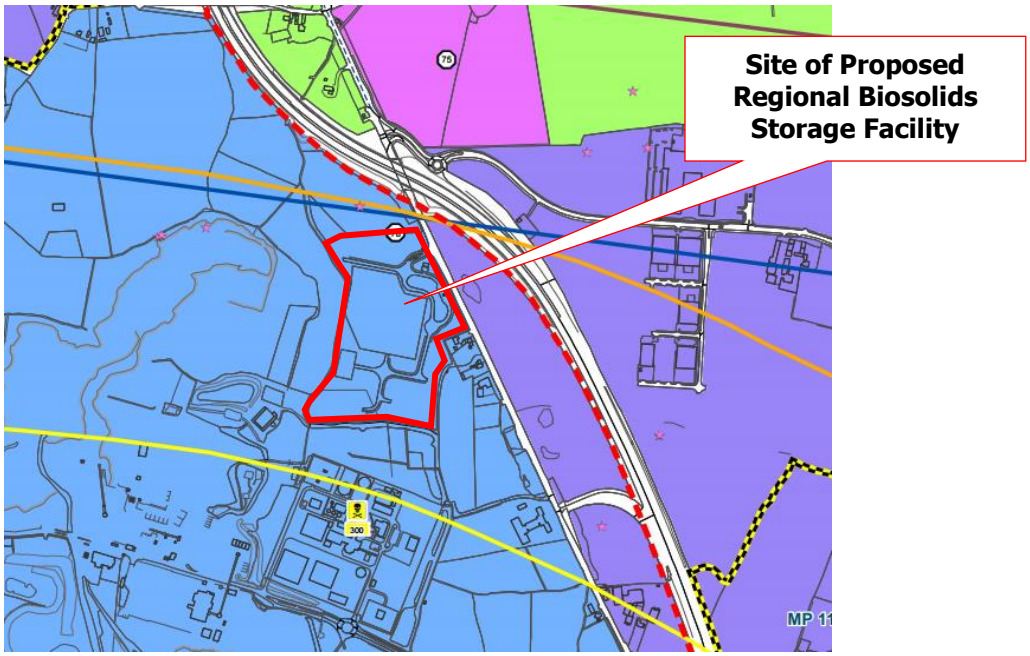


Figure 4.4 Zoning Context for RBSF

In addition to the above, the FCDP indicates a Local Objective (Local Objective 78) on the northern boundary of the RBSF site. It is reasonable to assume, given its location, that this local objective relates to the RBSF site; the planning history already previously highlighted further supports that contention. Appendix 2 of the FCDP notes that this objective seeks to:

> "*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."*

Project Response:
The RBSF site is situated in an area that is industrial in nature which includes an existing quarry (to the west) and an electricity power station (to the south). Planning permission for a waste facility has previously been permitted on the RBSF site.

In addition to the above, section 1.2.5 (Statutory Local Framework) of Volume 4 (Part A), of the EIAR for the RBSF, details the zoning and land use considerations relevant to the proposed RBSF site. It notes that a "*Biosolid 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 RBSF Component is a 'Waste Disposal and Recovery Facility (High Impact'".* Reference is also made to the FCDP Technical Guidance Notes in Appendix 4 which provides a description for such a use. The consideration of the RBDF as such a use is also noted to have been confirmed with Fingal County Council "*as part of the site selection process for this EIAR".*

The development of the proposed RBSF on this site is considered to be consistent with the land use zoning objective for this site and surrounding lands, and would not prejudice adjoining Land Use Zoning. It is also considered to be consistent with 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..

4.1.10.4 Odour Control Unit (OCU)

The OCU is proposed to be located just within, and alongside the boundary of, lands designated for the preparation of a Masterplan at Dubber.

The zoning objective of the proposed OCU site is "GE" – with the objective to "*Provide opportunities for general enterprise and employment*". The purpose of the General Employment (GE) zoning is to facilitate opportunities for general employment uses and compatible forms of industry, logistics and warehousing.

The GE use classes noted within the FCDP as being 'Permitted in Principle', include Utility Installations. As has been outlined within the Project Response provided under section 4.1.10.1, the definition for a utility installation (as provided within the Land Use Classes Technical Guidance Notes for Fingal Development Plan, (Appendix 4)), is "*A structure composed of one or more pieces of equipment connected to or part of a structure and/ or a facility designed to provide a public utility service such as the provision of heat, electricity, telecommunications, water or sewage disposal and/or treatment*". The proposed OCU is accordingly regarded as comprising such a use, and may therefore be considered to be compatible with the land use zoning objective and thus '*Permitted in Principle*'.

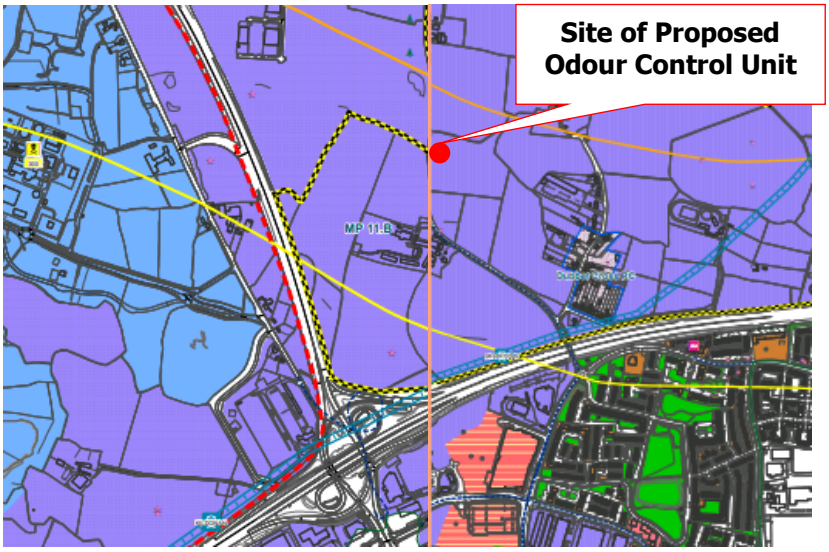


Figure 4.5 Zoning Context for OCU

Project Response:
The proposed OCU is a relatively modest sized rectangular structure, measuring a maximum of 10m x 5m (footprint) with a 5m maximum height vent pipe. It's scale and design is such that it will have no significant impact nature and scale of other General Employment uses and development proposals within the area. The proposed OCU is considered to be in compliance with the zoning objective as well as the strategic policies and objectives of the Fingal Development Plan which specifically support the implementation of the proposed Project.

4.1.10.5 Land Use Zoning: Below Ground Infrastructure

As previously outlined, the proposed Project includes a network of orbital sewers from Blanchardstown to the proposed WwTP at Clonshagh and from Grange to the proposed WwTP at Clonshagh. It also includes underground tanks at pumping stations, and a land based outfall pipeline from the WwTP and Sludge Hub Centre at Clonshagh to Baldoyle, and a marine based outfall pipeline from Baldoyle to 1km north east of Ireland's Eye, as well as a marine diffuser at this location.

The proposed 24.2km orbital sewer and land-based outfall pipeline network is located entirely within the administrative area of Fingal County Council. Due to its linear nature, the orbital sewer network passes beneath lands with a wide variety of land use zoning designations (General Employment; High Technology; Open Space; High Amenity and High Technology) in the Fingal County Development Plan 2017-2023.

Project Response:
The network of orbital sewers and the outfall pipelines will be located underground. The construction process to be employed during construction and the reinstatement of all lands above ground to their original state, as part of the development works, is assessed in the relevant chapters of the EIAR.

The proposed underground pipelines will not impact the associated uses of the zoning objectives designations, aside from future awareness and design considerations being given to their location. The effect on the land use is discussed within the EIAR chapter on Landscape and Visual Amenity (Chapter 12).

The need for the GDD Project to facilitate the continued growth and expansion of the GDA within the national economy has been clearly established within this Planning Report and all associated and supporting documentation, including within the EIAR, Alternative Sites Assessment Reports, and Project Needs Assessment Report. As has been clearly outlined, it is positively and explicitly supported in national, regional and local policy documents. The site assessment process demonstrates that this is the most suitable route and site(s) for the proposed Project. In addition, it is a specific objective of Fingal County Council to facilitate and provide for the implementation of the Greater Dublin Regional Drainage Project (Objective WT03).

4.1.11 CHAPTER 12 – DEVELOPMENT MANAGEMENT STANDARDS

The various provisions relating to the development management standards against which all planning applications will be assessed, are provided within Chapter 12, and are extensive. These also generally reflect and provide further support to the various provisions and objectives as contained within previous chapters – eg. in respect of considerations relating to SuDS and GI, high quality design, safe site access/ egress, and coastal areas etc. In terms of general principles however for public infrastructure projects such as that comprising the GDD Project, it is outlined that all development schemes shall promote the principles of green infrastructure (to be reflected within a landscaping plan), sustainable design, and with the aim of minimising resource consumption, waste reduction, water and energy use.

This chapter of the FCDP also makes provision for the consideration of green roofs and walls. It states that "*the use of green roofs will be promoted and encouraged as part of an integrated approach to the provision of green infrastructure, taking particular account of benefits in terms of SuDS provision".*

Whilst the proposed Project does not include design provision for green roofs or walls, it does include provision for SuDS at both the Abbotstown Pump Station site and the WwTP site. SUDS provision will incorporate a mix of rainwater harvesting, swales, infiltration trenches and permeable pavement.

<u>Utility Facilities</u>

The development standards incorporate specific provision in regard to utility facilities, and recognise that whilst utility facilities are necessary, especially for larger scale developments, they should be sensitively located. In this regard, the FCDP requires, where possible, that new utility structures be located in such a manner that they are not adjacent to or forward of the front building line of buildings or on areas of open space, and such structures should be of high quality design which will be maintained to a high standard by the relevant service provider.

<u>Movement and Infrastructure</u>

The various provisions/ objectives as outlined within chapter 7 (Movement and Infrastructure) of the FCDP, are also supported by various development standard objectives. Relevant applicable such objectives comprise:

> ***Objective DMS125:*** *Prohibit development requiring access onto Motorway and presume against access onto National Primary routes and seek to preserve the capacity, efficiency and safety of National Road infrastructure including junctions.*
>
> ***Objective DMS126:*** *Restrict unnecessary new accesses directly off Regional Roads. Ensure premature obsolescence of all county/local roads does not occur by avoiding excessive levels of individual entrances. Ensure that necessary new entrances are designed in accordance with DMRB or DMURS as appropriate, thereby avoiding the creation of traffic hazards.*
>
> ***Objective DMS128:*** *Require developers to provide a Traffic Impact Assessment where new development will have a significant effect on travel demand and the capacity of the surrounding transport network.*

Project Response:
The GDD Planning Application is accompanied by substantial appropriate supporting documentation and assessments, including a Natura Impact Assessment and Environmental Impact Assessment Report (EIAR) – which includes mitigation proposals, where necessary and appropriate. This is in accordance with the requirements associated with Objective DMS01, as well as Objectives DMS163 – DMS168 (Natural Heritage).

The proposed Project is compliant with the requirements relating to utility facilities as will be noted from the respective site layout plans and planning application drawings. The proposed Project has been designed specifically to incorporate a high-quality design ethos for each of it's component parts, as well as best available technology which would assist in ensuring this. The pumping station at Abbotstown for example, has been specifically designed to reflect the character of the adjacent St. Francis Hospice building.

Whilst the proposed Project does not include design provision for green roofs or walls, it does include provision for SuDS as part of it's green infrastructure approach, at both the Abbotstown Pump Station site and the WwTP site. SUDS provision will incorporate a mix of rainwater harvesting, swales, infiltration trenches and permeable pavement.

A comprehensive Traffic Study (see Chapter 13 of the EIAR) has been carried out, in compliance with Objective DMS128. The Traffic and Transport Chapter of the EIAR has concluded that the additional traffic flows predicted during both the construction and operational phases of the development will be minimal, and will have a negligible impact on the operating capacity of the roads. Notwithstanding this, mitigation measures have been proposed, including the provision of a Construction Management Plan (CTMP) and Mobility Management Plan (MMP) which will ensure that any potential traffic impacts will be minimised. The overall environmental impact is considered to be not significant.

Section 12.6 of chapter 12 (see also Table 12.13 within the FCDP) also contains provisions relating to Major Accidents - Seveso Sites. Considerations relating to the proposed RBSF are pertinent in this regard, as there is a designated Seveso Site, Gensys Power Ltd (T/A Huntstown Power Station, Huntstown Quarry) located immediately adjacent and to the south-west of the proposed Facility at Kilshane.

The Seveso Directive provides that appropriate consultation distances must be put in place to ensure that before decisions are taken, relevant technical advice, where appropriate, is obtained from the Health and Safety Authority (HSA), with regards to planning applications which are to be located within a certain distance of the perimeter of these sites.

> ***Objective DMS180:*** *Have regard to the provision of the 'Major Accident Directive' (Seveso III) (European Council Directive 2012/18/EU) and impose restrictions in consultation with the HSA, on developments abutting or within proximity of a Seveso site. The extent of restrictions on development will be dependent on the type of risk present and the quantity and form of the dangerous substance present or likely to be present.*
>
> ***Objective DMS183:*** *In areas where Seveso sites exist in appropriate locations with low population densities, ensure that proposed uses in adjacent sites do not compromise the potential for expansion of the existing Seveso use and in particular the exclusion of developments with the potential to attract large numbers of the public.*
>
> ***Objective DMS185:*** *Have regard to the advice of the Health and Safety Authority when proposals for new Seveso sites are considered and for all planning applications within the consultation distances stated in Table 12.13.*

Project Response:
The Seveso consultation distance applicable to the Huntstown Power Station is stated in the FCDP as being 300m from the perimeter of the site.

The northern perimeter of the Huntstown Power Station is located approximately 100m from the southern boundary of the Proposed RBSF Component site. The Proposed RBSF Component structures, at their nearest point, are located approximately 310m away from the northern perimeter of the Huntstown Power Station. While the site for the Proposed RBSF Component 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 An Bord Pleanála 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 RBSF Component structures are located outside of this consultation distance. Whilst the southern portion of the site is within the consultation zone, the works proposed in those areas amount to the provision of roads and services associated with normal site development works and are not considered to amount to a source of or increase the risk or consequence of a major accident from a planning perspective. As a result, there is no immediate issue arising regarding the proximity of this adjoining Seveso site. The applicant has written to the Health and Safety Authority (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 Bord Pleanála whom we understand An Bord Pleanála will engage with formally, during the SID application process.

The Proposed RBSF Component recognises the existing Seveso site and has been

designed to ensure its buildings lie outside the consultation zone.

4.2 OVERALL COMPLIANCE WITH DEVELOPMENT POLICIES

The sectoral review of the policies and objectives of the FCDP 2017-2023, has demonstrated that the proposed Project is in accord with the requirements, policies and objectives as set out within the preceding sections of this Planning Report. Specific 'Project Responses' have been provided within each section which highlight and respond to the various relevant objectives and provisions as are contained within the FCDP.

The need for the proposed Project to facilitate the continued growth and expansion of the GDA within the national economy has been clearly established within the EIAR, and is supported in national, regional and local policy documents, as identified in this Planning Report. In addition, it is a specific objective of Fingal County Council to facilitate and provide for the implementation of the Greater Dublin Regional Drainage Project (Objective WT03).

While, for the reasons set out above, it is considered that the proposed Project complies with and promotes the objectives contained in the Fingal County Development Plan (2017-2023), in the event that the Board considers any aspect of the proposed Project to materially contravene any of the provisions or zoning objectives of that Plan, it is submitted that the Board should grant permission under section 37G(6) of the Planning and Development Act (as amended) in circumstances where the proposed Project is clearly of significant strategic importance to the sustainable planning and development of the greater Dublin area and will greatly assist Ireland to comply with its obligations under the UWWTD.

4.3 DEVELOPMENT CONTRIBUTIONS AND COMMUNITY GAIN

4.3.1 DEVELOPMENT CONTRIBUTIONS

Irish Water's statutory role and core function, is that of a Public Water Authority. The proposed GDD Project provides 'public infrastructure and facilities which will benefit development in the area of County Fingal', and which will be provided by Irish Water, on behalf of Fingal County Council - it is therefore not anticipated that any grant of permission which may be forthcoming from ABP would be subject to a Development Contribution obligation to the Council.

In the above regard, the provision of 'public infrastructure and facilities' is covered within the meaning of same, within Section 48 of the Planning and Development Act 2000 (as amended), and includes at (c) "the provision of roads, car parks, car parking places, sewers, waste water and waste water treatment facilities, service connections, watermains and flood relief work".

As an observation with specific reference to the above and the Fingal County Development Contribution Scheme itself, it is noted that the scheme is stated to be applicable to the following classes of development: 'residential class and industrial/

commercial' class. The proposed GDD Project is not considered to come within any of these classes of development.

4.3.2 COMMUNITY GAIN

As is highlighted within the RPS Public Stakeholder Participation Report, "*all communities within the GDA will benefit either directly or indirectly from the development of the proposed new regional treatment facility*". The proposals relating to the proposed Project and community gain have been informed by stakeholder input, and are detailed within the RPS document titled '*Greater Dublin Drainage – Community Benefits Scheme*' submitted as part of the Planning documentation for this SID application. In summary, community benefits will be provided under three categories; Employment, Education and Environment.

5. ENVIRONMENTAL IMPACTS

This application is accompanied by an Environmental Impact Assessment Report (EIAR) in accordance with The EIAR has been prepared in accordance with Environmental Assessment Directive 2014/52/EU and Schedule 6 of the Planning and Development Regulations 2001 (as amended).

The Environmental Impact Assessment Report enclosed with this planning application describes the environmental impacts predicted for this proposed Project.

The EIAR, and its various respective chapters that have been referred to in the project responses of this Planning Report, demonstrate that the proposed Project is in full compliance with the various sectoral policies and objectives of the Fingal County Development Plan (2017 – 2023), and also the Eastern-Midlands Regional Waste Management Plan (2015-2021). The accompanying EIAR is part of the documentation required to demonstrate how the project complies with those policies and objectives.

5.1 NATURA IMPACT ASSESSMENT REPORT

As outlined in Section 1.5 of this report, a Natura Impact Assessment has also been carried out, and a report of this assessment is also included with the planning application documentation.

The NIS for the proposed Project concludes "*beyond reasonable scientific doubt that the proposed Project with the implementation of the prescribed mitigation measures will not give rise to significant impacts either individually or in combination with other plans and projects, in a manner which adversely impacts the integrity of any designated site within the Natura 2000 network".*

6. OTHER REPORTS/ ASSESSMENTS

A number of other Reports accompany this Application including:

6.1 FLOOD RISK ASSESSMENT

A Flood Risk Assessment of the proposed Project was carried out. The full report is included as an appendix to Chapter 17 (Hydrology and Hydrogeology) of the EIAR (Volume 3A). The assessment was undertaken following the methodology recommended in the FRM Guidelines, and has initially concluded that the probability of flooding in respect of the component parts comprising the proposed Project, is low risk, and that there will be indiscernible impacts arising from the proposed Project on the existing flood regime of the proposed Project study area.

6.2 TRAFFIC AND TRANSPORT ASSESSMENT

A Traffic Study has been undertaken as part of the assessment process of the proposed Project, and is incorporated within Chapter 13 of the EIAR (and its appendices). The Traffic Study assesses the impacts of the traffic associated with the construction and operation of the proposed Project.

The Traffic Study includes an assessment of current and future network conditions. The objective is to establish the scope of mitigation measures that will be required to avoid or minimise the impacts of the project on road users, both in the vicinity of the site and within the wider road network.

The findings incorporated within Chapter 13 for the Construction and Operational phases of the proposed Project, highlight the fact that the proposed Project will not impact the safety, capacity and efficiency of National roads and associated junctions, aside from some construction related impacts – with construction related impacts being regarded as minor, and operational phase construction impacts being considered negligible.

In order to minimise the impact of the Construction Phase on the surrounding road network therefore, mitigation measures are included in the Construction Traffic Management Plan (CTMP), and are also described in Chapter 13 (Traffic and Transport) of the EIAR. These include a detailed construction programme, the scheduling of deliveries of materials to site outside of peak times, visual monitoring of any roads used by construction traffic and the management of site entrances to omit the risk of Heavy Goods Vehicles (HGVs) queues onto the public road network.

6.3 LANDSCAPE MASTERPLAN AND STATEMENT

Chapter 12 (Landscape and Visual) of the EIAR assesses the landscape effects and visual effects of the proposed Project, separately and in accordance with the *Guidelines for Landscape and Visual Impact Assessment* (Landscape Institute and Institute of Environmental Management and Assessment 2013). This assessment also takes into account the FCDP landscape policy context and Landscape Character Assessment for Fingal, as outlined within Chapter 5 of the FCDP. The landscape masterplan will comprise part of the Construction Environment Management Plan.

As is highlighted within Chapter 12 of the EIAR, "*Given that the proposed pipeline routes of the Proposed Project will be buried underground (or run along the seabed) and the landscape above reinstated, Operational Phase landscape and visual impacts will be negligible. The localised, temporary and transient nature of pipeline related construction works also ensures that significant impacts will not occur at the Construction Phase.*

The proposed Abbotstown pumping station will be a modest scale facility that will be well enclosed and substantially housed in a vernacular building that will not contrast with its surrounding landscape setting.

The proposed WwTP has the most potential to generate significant impacts due to the scale and nature of the facility in an urban/rural interface setting. However, significant impacts are not considered to occur as it is buffered from surrounding roads and residences by considerable distances and will not be readily visible from the surrounding area even without the consideration of the suite of mitigation measures proposed. Some of the proposed mitigation measures are 'embedded' in the overall siting and design of the Proposed Project and consist of a perimeter earth berm, the dispersed arrangement of buildings within the site, and a recessive and disseminated colour scheme for buildings. When these inherent mitigation measures are coupled with the proposed internal planting within the proposed WwTP site and external planting to the perimeter berm, residual impacts will be further reduced.

7. PLANNING ASSESSMENT AND OVERALL CONCLUSION

The proposed Project will assist in ensuring that sufficient capacity exists within the Greater Dublin Area in order to appropriately treat wastewater arising within the northern part of the GDA. This would also concurrently ensure that Ireland, through Irish Water, meet the requirements of the Urban Wastewater Directive, the Water Framework Directive, as well as other relevant EU Directives and National Regulations related to water quality. As such the proposed Project represents essential strategic infrastructure which is required for the continued growth and development of communities and businesses within greater Dublin. Its implementation will:

- Assist in ensuring the protection, enhancement and maintenance of water quality and the natural environment, and will provide for improved environmental and infrastructural benefits for a significant proportion of the existing and future GDA communities and population. This is in line with sustainable development and the need to consolidate built up areas.

- Assist Ireland in meeting its obligations under the Urban Wastewater Directive (91/271/EEC) and the Water Framework Directive (WFD), the Sewage Sludge Directive (86/278/EEC), the Waste Framework Directive (2008/98/EC), and the Wastewater Discharge (Authorisation) Regulations 2007.

- Represents the provision of key growth enabling infrastructure for one of the Country's primary development centres, and support the sustainability and quality of life for those living within the wider hinterland.

- Be in compliance with, and support various relevant EU, national, regional and local policies, frameworks and objectives.

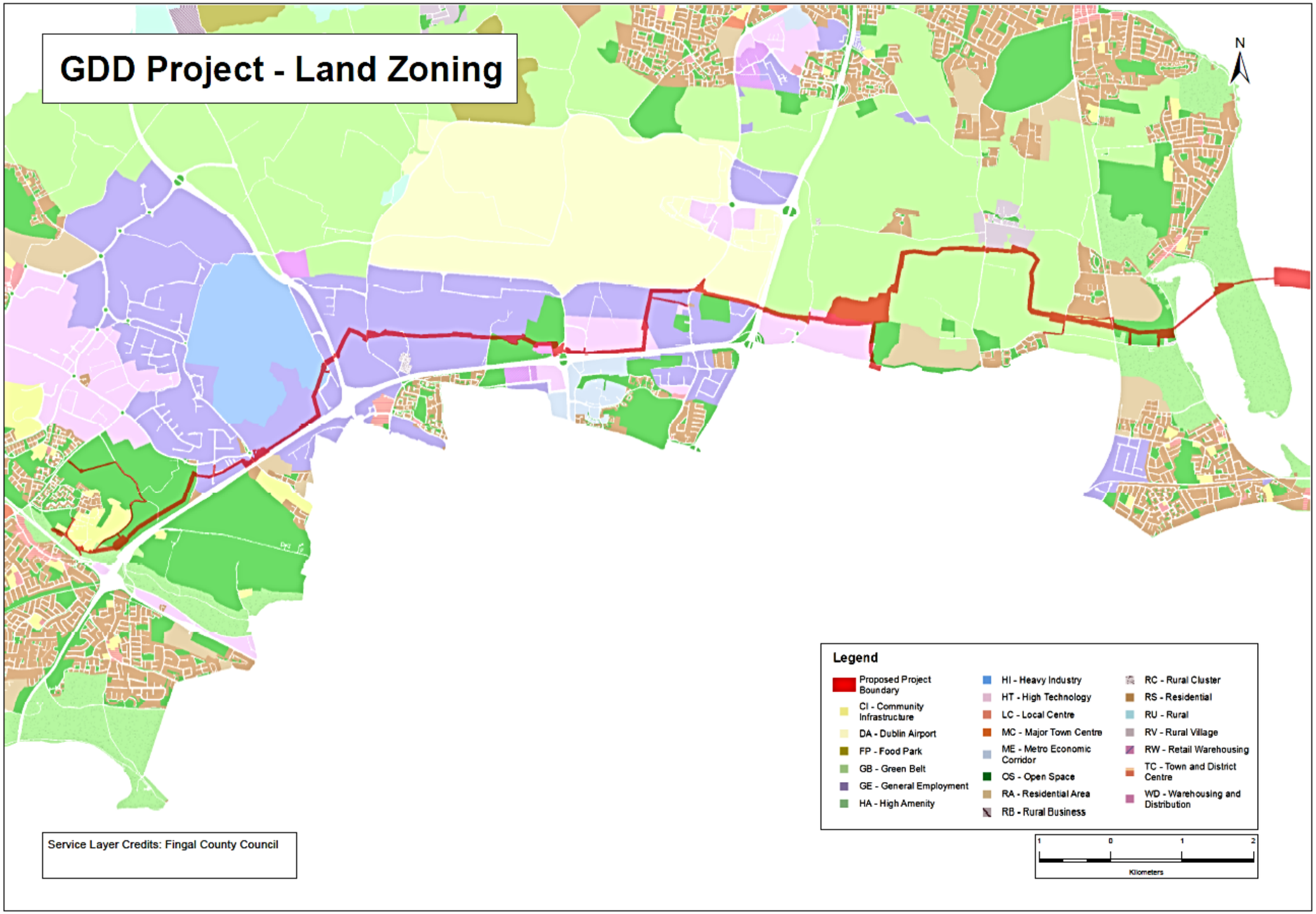
- Would be of strategic economic or social importance to the State or the region in which it would be situated, through the provision of significant additional wastewater treatment capacity and associated facilities, and also provide much needed headroom, to service lands and sustain growth and future development within a fast-growing area.

- Contribute substantially to the fulfilment of objectives in a number of National and Regional Strategies and Plans, including the National Planning Framework and associated National Development Plan, the National Wastewater Sludge Management Plan, and the RPG's for the GDA.

- Would have a significant effect on the area of more than one planning authority, including that of Fingal, Dublin City Council, Meath and Kildare.

The proposed Project is therefore considered to be in accordance with the proper planning and sustainable development of the area.

APPENDIX 1 PROPOSED PROJECT ZONING CONTEXT


GDD Project - Land Zoning
N
Legend
Proposed Project Boundary
CI - Community Infrastructure
DA - Dublin Airport
FP - Food Park
GB - Green Belt
GE - General Employment
HA - High Amenity
HI - Heavy Industry
HT - High Technology
LC - Local Centre
MC - Major Town Centre
ME - Metro Economic Corridor
OS - Open Space
RA - Residential Area
RB - Rural Business
RC - Rural Cluster
RS - Residential
RU - Rural
RV - Rural Village
RW - Retail Warehousing
TC - Town and District Centre
WD - Warehousing and Distribution
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APPENDIX 2 GREEN INFRASTRUCTURE PLAN

Greater Dublin Drainage Project

Irish Water

Green Infrastructure Plan

June 2018

Contents

1. Introduction

The Greater Dublin Drainage Project, the Proposed Project, is required to meet the need for additional wastewater treatment within the Dublin area, and will serve the wastewater needs of existing and future drainage catchments in the north, west and north-west of the Dublin agglomeration. In addition, the Proposed Project will have the capacity to provide sustainable treatment for municipal wastewater sludge and domestic septage, generated within Fingal, to produce a 'biosolid' end product and will utilise the bio-gas produced during the treatment process as an energy source on site.

1.1 Project Description

The Proposed Project will comprise the following key elements:

- Regional Wastewater Treatment Plant (WwTP), of 500,000PE capacity to be located on a 29.8ha site in the townland of Clonshagh in Fingal;
- Sludge Hub Centre (SHC) to be co-located on the same site as the Regional WwTP;
- A 13,700m length Orbital Sewer from Blanchardstown to the WwTP, including an Odour Control Unit at Dubber;
- A 600m connecting sewer from the North Fringe Sewer (NFS) to the WwTP;
- Abbotstown Pumping Station to be located in the grounds of the National Sports Campus on a 0.4ha site;
- An 11,300m length Outfall Pipeline from the WwTP to the outfall point approximately one kilometre north-east of Ireland's Eye;
- Regional Biosolids Storage Facility (RBSF) to be located on a 11ha site at Newtown in Fingal;
- Access Road from existing R139, and new egress point onto the Clonshaugh Road; and
- All associated construction compounds and ancillary work areas.

Chapter 4 (the Proposed Project) of the EIAR accompanying this Planning Report and application, provides a more detailed description of the Proposed Project and its component parts.

1.2 Requirement for Green Infrastructure Plan

The statutory development plan for the area in which the Proposed Project is to be located is the Fingal County Development Plan 2017-2023 (FCDP). The plan contains the following Objective in relation to proposed development such as drainage schemes:

Objective GI22
Require all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres to submit a Green Infrastructure Plan as an integral part of a planning application.

This report responds to Objective GI22. This comprises the following steps

- Identifying the policy context for green infrastructure as set out in the Fingal County Development Plan 2017-2023;

- identifying the design details to respond to the key themes of the Fingal County Council Green Infrastructure Strategy; and
- noting how the Proposed Project responds to the policy context set out in Objective GI22.

2. Policy Context

The statutory development plan for the area in which the Proposed Project is to be located is the Fingal County Development Plan 2017-2023 (FCDP). Chapter 8 of the FCDP relates to Green Infrastructure. The Council identifies a key challenge for Fingal as being to "*manage growth so that the County's agricultural production capacity is maintained as urban expansion continues and in a way which protects the County's natural and cultural resources for the future*".

2.1 Mapped Green Infrastructure

The Council has identified and mapped key elements of the County's strategic green infrastructure on the FCDP maps under five key Green Infrastructure (GI) themes – Biodiversity; Parks, Open Space and Recreation; Sustainable Water Management; Archaeological and Architectural Heritage; and Landscape, as set out in the three appended Figures. These assist in illustrating where these mapped elements interface with the Proposed Project.

Figure - Green Infrastructure 1
It is noted that Abbotstown Pumping Station and the pipeline passes through a Highly Sensitive Landscape (HSL) at Abbotstown, while the outfall pipeline passes through a HSL at Portmarnock.

The outfall pipeline crosses a proposed 'Rural Greenway' at the Coast Road, Portmarnock.

The outfall pipeline passes through a number of areas designated for ecological purposes, including

- Designated Shellfish Waters;
- Annex 1 Habitat;
- SAC;
- Ecological Buffer Zone;
- Flora Protection Order (1999) Site;
- Fingal Rare Flora Site;
- Area within 100m of coastline vulnerable to Erosion

The Abbotstown Pumping Station and elements of the pipeline lie within an area defined as 'Nature Development Area'.

Figure - Green Infrastructure 3
The Outfall pipeline passes through areas with an identified flood risk and water quality issues:

- Fluvial Flooding (1% and 0.1%);
- coastal flooding (0.5% and 0.1%); and
- crosses a river of 'poor' quality status;

2.2 Objectives

Key proposals for the management of existing green infrastructure and the provision of new green infrastructure as part of the FCDP, are highlighted within a number of objectives. Those considered relevant to the Proposed Project, are considered as comprising the following:

Management of Green Infrastructure as part of the Development Plan

Objective GI08: *Integrate the provision of green infrastructure with infrastructure provision and replacement, including walking and cycling routes, as appropriate, while protecting biodiversity and other landscape resources.*

Green Infrastructure and Planning

Objective GI20: *Require all new development to contribute to the protection and enhancement of existing green infrastructure and the delivery of new green infrastructure, as appropriate.*

Objective GI21: *Require all new development to address the protection and provision of green infrastructure for the five GI themes set out in the Development Plan (Biodiversity, Parks, Open Space and Recreation, Sustainable Water Management, Archaeological and Architectural Heritage, and Landscape) in a coherent and integrated manner.*

Objective GI22: *Require all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres to submit a Green Infrastructure Plan as an integral part of a planning application.*

Theme Specific Objectives

Objective GI24: *Ensure biodiversity conservation and/or enhancement measures, as appropriate, are included in all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres.*

Objective GI25: *Integrate provision for biodiversity with public open space provision and sustainable water management measures (including SuDS) where possible and appropriate.*

Objective GI28: *Provide attractive and safe routes linking key green space sites, parks and open spaces and other foci such as cultural sites and heritage assets as an integral part of new green infrastructure provision, where appropriate and feasible.*

Objective GI33: *Seek the provision of green roofs and green walls as an integrated part of Sustainable Drainage Systems (SuDS) and which provide benefits for biodiversity, wherever possible.*

Objective GI34: *Ensure, wherever possible and appropriate, that elements of the archaeological and architectural heritage are fully integrated into proposals for new developments at the project design stage.*

Objective GI36: *Ensure green infrastructure provision responds to and reflects landscape character including historic landscape character, conserving, enhancing and augmenting the existing landscapes and townscapes of Fingal which contribute to a distinctive sense of place.*

3. Green Infrastructure Response

3.1 Green Infrastructure Project Response by Theme

The Green Infrastructure Objectives for Fingal requires the protection and provision of green infrastructure for five themes set out in the Objective GI21 of the FCDP, as follows

- Biodiversity;
- Parks, Open Space and Recreation;
- Sustainable Water Management;
- Archaeological and Architectural Heritage; and
- Landscape.

The EIAR sets out how each of these themes has been addressed in the Proposed Project, as part of the scheme design and mitigation measures. The measures proposed are described in further detail in the EIAR chapters, as set out below in Table 3.1.

Table 3.1 Green Infrastructure Project Response

Green Infrastructure Theme	Green Infrastructure Objective Reference	EIAR Reference
Biodiversity	GI24	Biodiversity (Chapters 10 and 11)
Parks, Open Space and Recreation	GI36	Population and Human Health: Population (Chapter 6) Landscape and Visual (Chapter 12)
Sustainable Water Management	GI25, GI33	Hydrology and Hydrogeology (Chapter 17)
Archaeological and Architectural Heritage	GI34	Archaeological, Architectural and Cultural Heritage (Chapter 16)
Landscape	GI36	Landscape and Visual (Chapter 12)

The measures proposed for the Regional Biosolids Storage Facility is collated separately in Volume 4A of the EIAR.

3.2 Site Specific Response

3.2.1 Waste Water Treatment Plant

Design

The primary focus of the green infrastructure response is the proposed WwTP site, as it represents the most visible permanent aspect of the Proposed Project and has the potential to make the largest contribution to green infrastructure. The strategy for the proposed WwTP site is multifaceted and seeks to blend and buffer the Proposed Project within its surroundings, setting out proposals in relation to site layout, external finishes of buildings, perimeter screening using a combination of earth berms and tree planting around the site, and internal planting.

In relation to visual screening, for those boundaries of the proposed WwTP site adjoining the rural context to the east, north and west, a series of flowing organic embankments planted with dense bands (approximately 15m to -20m wide) of hedgerow tree species will provide visual screening of the Proposed Project. The embankments will rise to a maximum height of 4m with gentle outward facing slopes in order to blend with the flat to mildly undulating terrain that surrounds the proposed WwTP site. This will be achieved using a buffer zone width of approximately 60m. Between the mounds, specimen trees will be provided, rising from a more open wildflower meadows context. The dense but linear bands of hedgerow vegetation topping the mounds will reference the hedgerows and tree-lined field boundaries of the agricultural fields in the vicinity. The meadow and specimen trees between the dense sections of hedgerow planting will reference the parkland aesthetic of the nearby demesne landscapes to the east.

The southern boundary will be presented as a bold architectural landscape treatment in order to tie in with the future development of the lands to the south (future IDA Business Park).

Semi-mature tree planting (minimum 14cm to 16cm girth) will be used for all planting along the southern boundary and internal treelines to aid early establishment. Mixed age classes ranging from semi-mature (minimum 14cm to 16cm girth) down to feathered whips (approximately 1.25m tall) will be utilised for perimeter berms in order to establish a dense screen over a longer period of time. It is envisaged that it will take up to seven years for all planting to reach a maturity that will afford the intended screening effectiveness.

The schematic of the landscape and visual mitigation concept is provided in Figure 12.4 Landscape and Visual Mitigation Concept, and the Landscape Masterplan is provided in Figure 12.5 Wastewater Treatment Plant Landscape Mitigation Plan.

Green Infrastructure Mapped Objectives

The site is not within or close to any of the green infrastructure corridors or elements identified in the FDP Green infrastructure maps. The only existing landscape features on site that could contribute to green infrastructure are the remaining hedgerows and artificial drainage ditches along the western, northern, and eastern boundaries.

The identified Green Infrastructure cycle routes within the FCDP do not link to the proposed WWTP site. The Green Infrastructure network identifies open space to the south east (Craobh Chiarain GAA) and the Mayne River to the North, although direct pedestrian connection to these sites from the WwTP site will not be permitted.

Access

Public recreational access to the grounds of the fixed infrastructure sites, including the WWTP, the pumping stations and the RBSF, is not possible for site security reasons and therefore these sites cannot contribute to extending the network of public walkways or recreational facilities and amenities.

However, the proposals fulfil other aims for green infrastructure by protecting and reinforcing existing hedgerows and managing meadowland, improving the habitat for birds and insects.

SuDS

In respect of open space provision and the associated requirement for SuDS, the Proposed Project includes such future provision at the WwTP site. SUDS provision will be designed in accordance with CIRIA guidance (SUDS manual 2015, C735) and will incorporate a mix of rainwater harvesting, swales, infiltration trenches, permeable pavement, underground storm attenuation tanks (StormTec or equivalent) and oil interceptors such that run-off is

controlled to greenfield rates. Final discharge from the WwTP site will be to the Cuckoo Stream. Final discharge from the access road to the WwTP will be to the Mayne River. Final discharge from the Abbotstown Pumping Station site will be to a tributary of the Tolka. All discharges shall be in compliance with EPA standards and licensing requirements and conditions.

3.2.2 Abbotstown Pumping Station

Abbotstown Pumping Station and the pipeline pass through a Highly Sensitive Landscape (HSL) at National Sports Campus Ireland, which has a mature parkland landscape character. The outfall pipeline passes through a HSL at Portmarnock.

For the pipeline aspects of the Proposed Project, the main mitigation measure will be the reinstatement, insofar as possible, of ground cover, trees or hedgerows disturbed during the Construction Phase. Depending on the season in which construction works take place, it may be possible to store and replace sections of dormant hedgerows once work on a particular section of the proposed pipeline routes is complete. In other instances, new planting will be undertaken and this will utilise advanced nursery stock so as to reduce the timeframe over which any temporary landscape and visual impacts from vegetation loss are experienced.

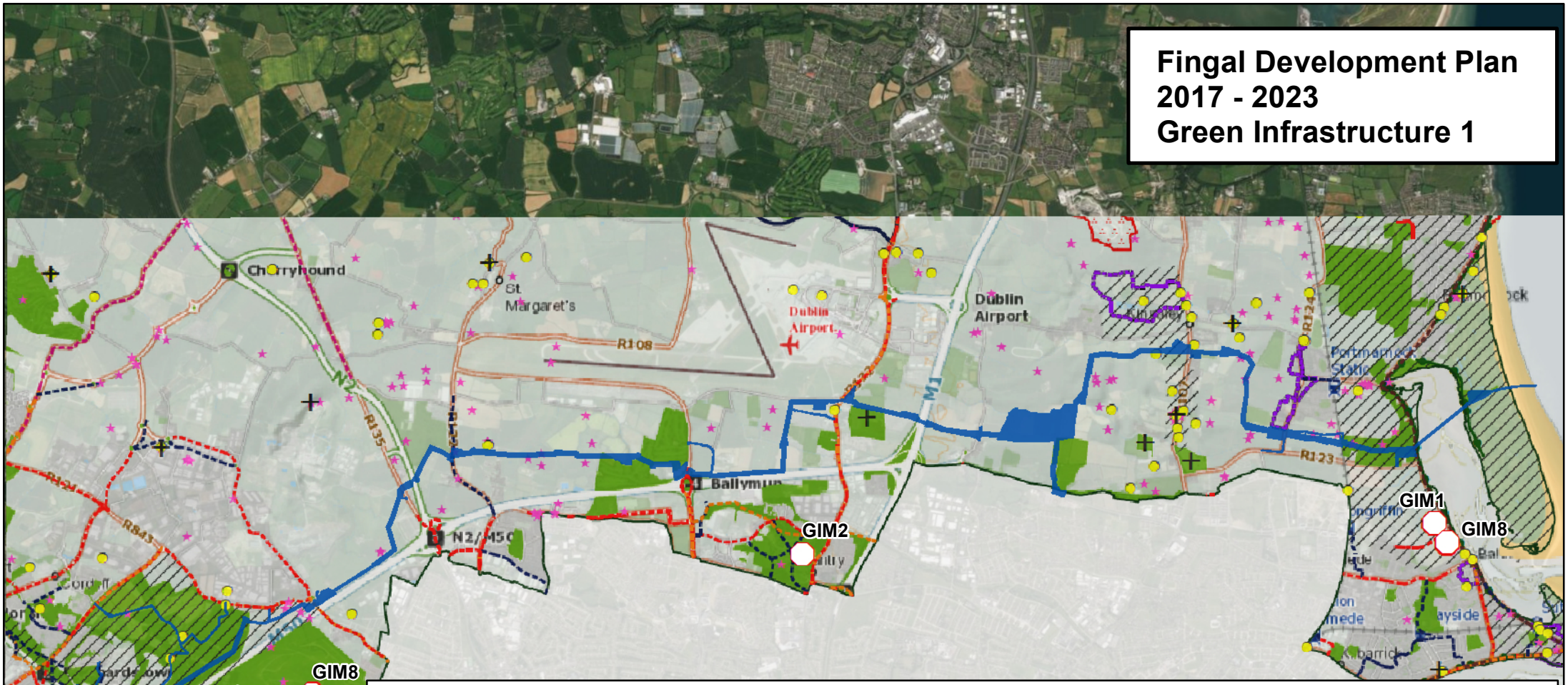
The SuDS strategy for the pumping station will designed in accordance with the approach set out for the WwTP above.

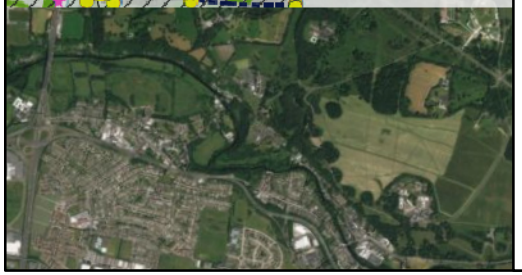
3.2.3 Outfall Pipeline

The outfall pipeline crosses the Coast Road at Portmarnock. This road is identified in the FCDP for the provision of a ‘Rural Greenway’. During the design process, the location and orientation of the construction compound (Compound no. 9) at this location has been amended to avoid impact on the cycleway route during the construction period. There will be no impact on the cycleway during the operation phase.

Appendix A. Fingal Development Plan 2017-2023 Green Infrastructure 1 Drawing

Fingal Development Plan 2017 - 2023
Green Infrastructure 1





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Green Infrastructure Mapped Objectives

GIM1	Provide new Active Recreation Hubs in Bremore Regional Park, St. Catherine's Park (Rush), Lusk, Donabate, Mooretown/Oldtown (Swords), Drinan, Baldoyle Racecourse Park and Phoenix Park Racecourse
GIM2	Protect the natural and built heritage of the following (which include important historic sites, landscapes and gardens, while providing significant public amenities): Bremore Castle and Park, Ardgillan Castle and Demesne, Newbridge House and Demesne, Malahide Castle and Demesne, Swords Castle and Park, Santry Demesne and Beechpark (Clonsilla)
GIM8	Provide new Regional Parks at the following locations: Baleally Lane, Mooretown/Oldtown (Swords), Baldoyle, and Dunsink subject to Appropriate Assessment screening

Specific Objectives

- Historic Graveyard
- Protected Structures
- Recorded Monuments
- Preserve Views
- Architectural Conservation Area (ACA)
- Highly Sensitive Landscape
- Beach
- County Geological Heritage Site
- Historic Landscape Characterisation (HLC) Area
- Open Space
- Liffey Valley & Howth SAAO (Special Amenity Area Order)
- Howth SAA (Special Amenity Area) Buffer Zone

See County Strategy / Index Map for Zoning Descriptions

Project Elements Legend

- GDD Proposed Construction Corridor

GDA Cycle Network

- Rural Routes
- Rural Greenways
- PSG Network
- Feeder Network
- Base Cycle Network

Note : These cycle networks are an extract from www.nationaltransport.ie/publications/transport-planning/gda-cycle-network-plan. (Please see this website for further information)

Alternatively visit www.fingal.ie/interactive maps to view these routes

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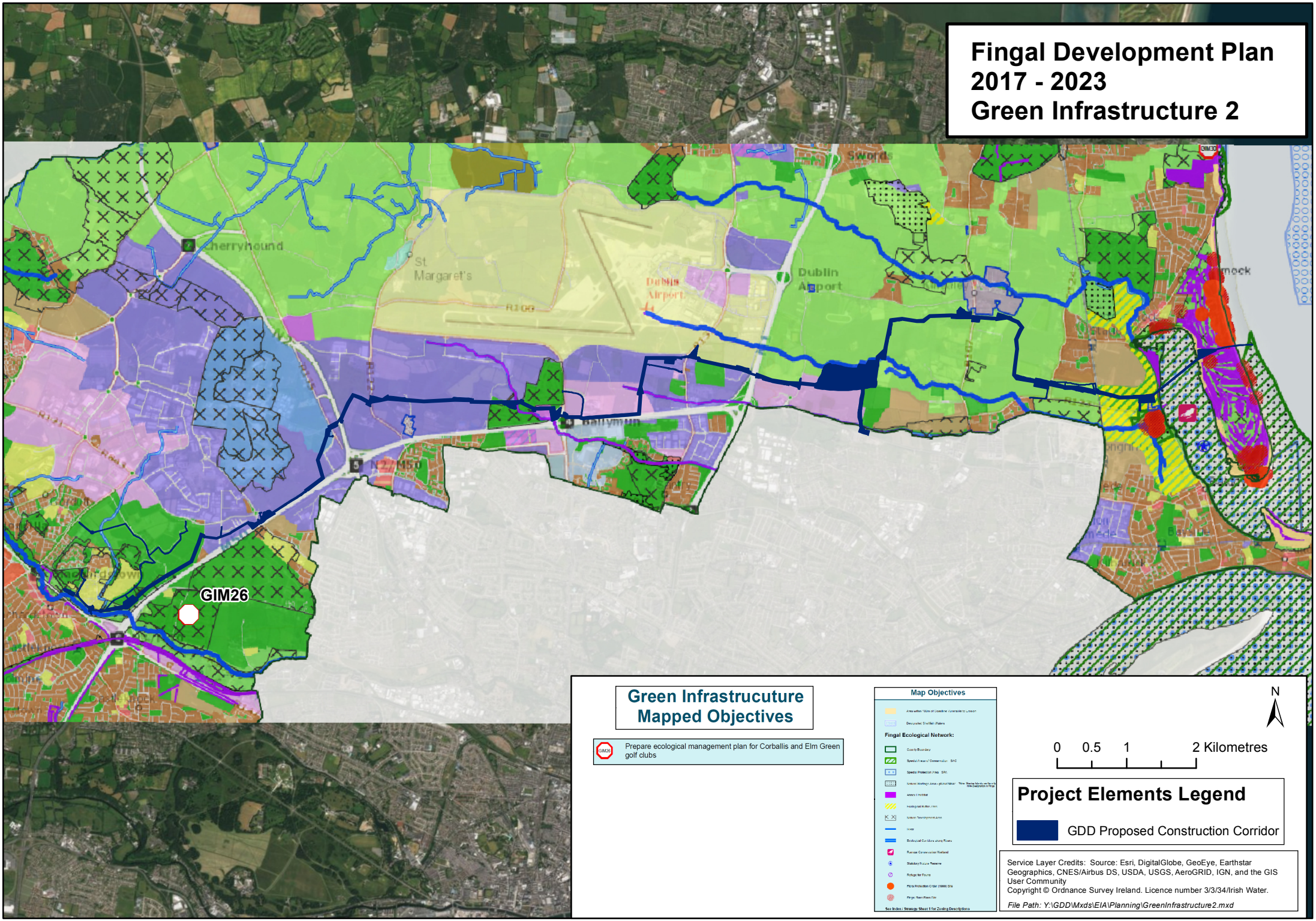
Appendix B. Fingal Development Plan 2017-2023 Green Infrastructure 2 Drawing

Fingal Development Plan 2017 - 2023
Green Infrastructure 2



Green Infrastrucuture Mapped Objectives

GIM26 — Prepare ecological management plan for Corballis and Elm Green golf clubs

Map Objectives

Fingal Ecological Network:

N

0 0.5 1 2 Kilometres

Project Elements Legend

GDD Proposed Construction Corridor

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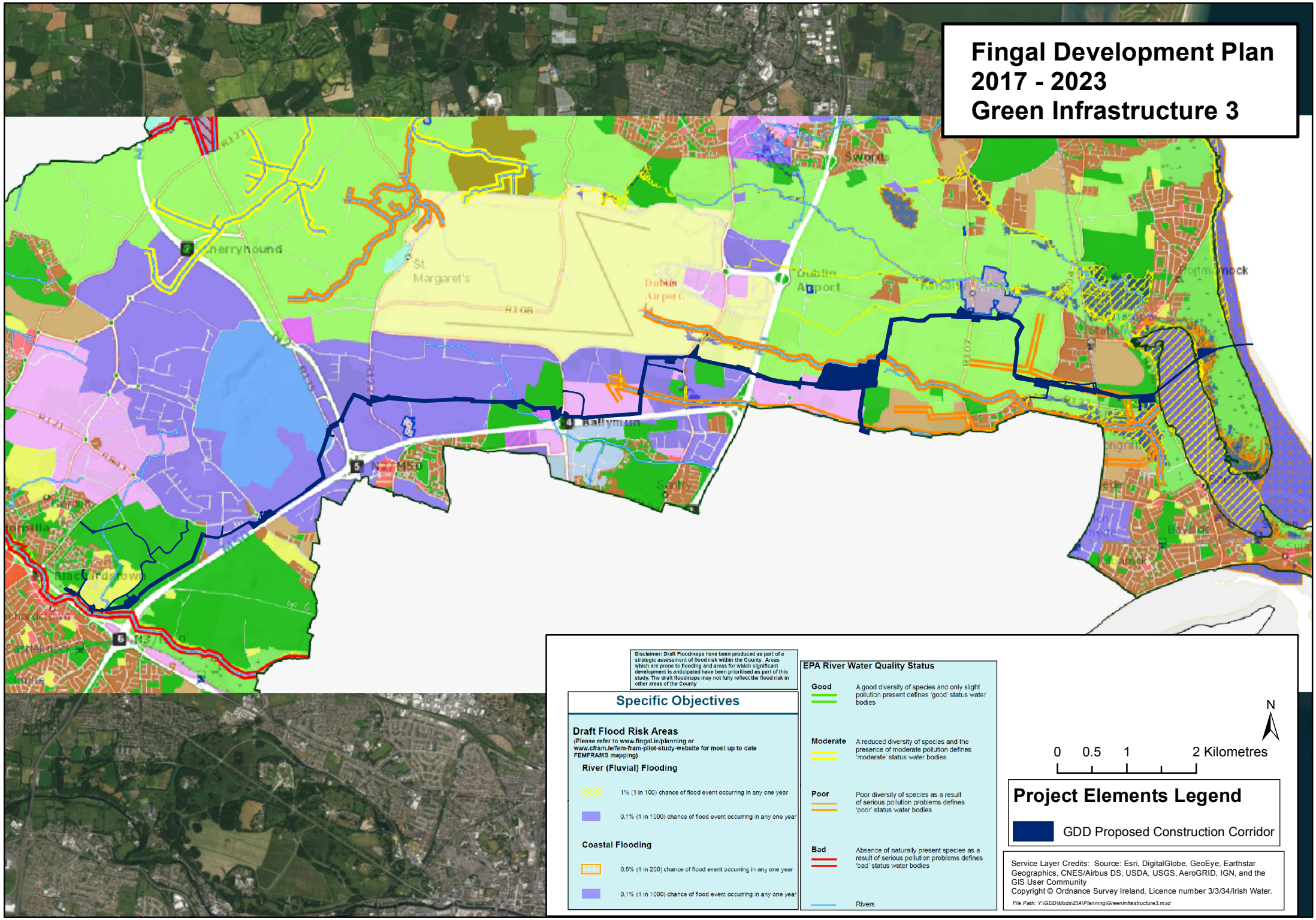
Appendix C. Fingal Development Plan 2017-2023 Green Infrastructure 3 Drawing

Fingal Development Plan 2017 - 2023
Green Infrastructure 3



Disclaimer: Draft Floodmaps have been produced as part of a strategic assessment of flood risk within the County. Areas which are prone to flooding and areas for which significant development is anticipated have been prioritised as part of this study. The draft floodmaps may not fully reflect the flood risk in other areas of the County

Specific Objectives

Draft Flood Risk Areas
(Please refer to www.fingal.ie/planning or www.cfram.ie/fem-fram-pilot-study-website for most up to date FEMFRAMS mapping)

River (Fluvial) Flooding

- 1% (1 in 100) chance of flood event occurring in any one year
- 0.1% (1 in 1000) chance of flood event occurring in any one year

Coastal Flooding

- 0.5% (1 in 200) chance of flood event occurring in any one year
- 0.1% (1 in 1000) chance of flood event occurring in any one year

EPA River Water Quality Status

- **Good** — A good diversity of species and only slight pollution present defines 'good' status water bodies
- **Moderate** — A reduced diversity of species and the presence of moderate pollution defines 'moderate' status water bodies
- **Poor** — Poor diversity of species as a result of serious pollution problems defines 'poor' status water bodies
- **Bad** — Absence of naturally present species as a result of serious pollution problems defines 'bad' status water bodies
- Rivers

N

0 0.5 1 2 Kilometres

Project Elements Legend

GDD Proposed Construction Corridor

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