



## Greater Dublin Drainage

# Public Consultation Report on *'Alternative Site Assessment Phase One: Preliminary Screening Outcomes Report, October 2011'*

April 2012

RPS

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# 1 INTRODUCTION

## 1.1 PROJECT BACKGROUND

The Greater Dublin Drainage initiative aims to provide strategic drainage infrastructure required for the Greater Dublin Area (GDA) to continue to develop, both socially and economically.

The GDA comprises two Regional Authority areas, the Mid-East Regional Authority, which includes Meath, Kildare, and Wicklow County Councils, and the Dublin Regional Authority, which includes Dublin City Council and Dún Laoghaire-Rathdown, Fingal, and South Dublin County Councils.

To guide the future provision of wastewater infrastructure in the GDA, the *Greater Dublin Strategic Drainage Study (GSDSDS) Final Strategy Report* and its subsequent *Strategic Environmental Assessment (SEA)* were prepared in 2005 and 2008 respectively. These documents were prepared on behalf of the seven local authorities that form the GDA.

The Greater Dublin Drainage project is being led by Fingal County Council, on behalf of Dublin City Council, Dún Laoghaire-Rathdown County Council, and South Dublin County Council, in partnership with Kildare and Meath County Councils. While Wicklow County Council is part of the GDA and contributed to the preparation of the GSDSDS and SEA, it is not intended that the Greater Dublin Drainage project will take and treat wastewater from Wicklow County Council.

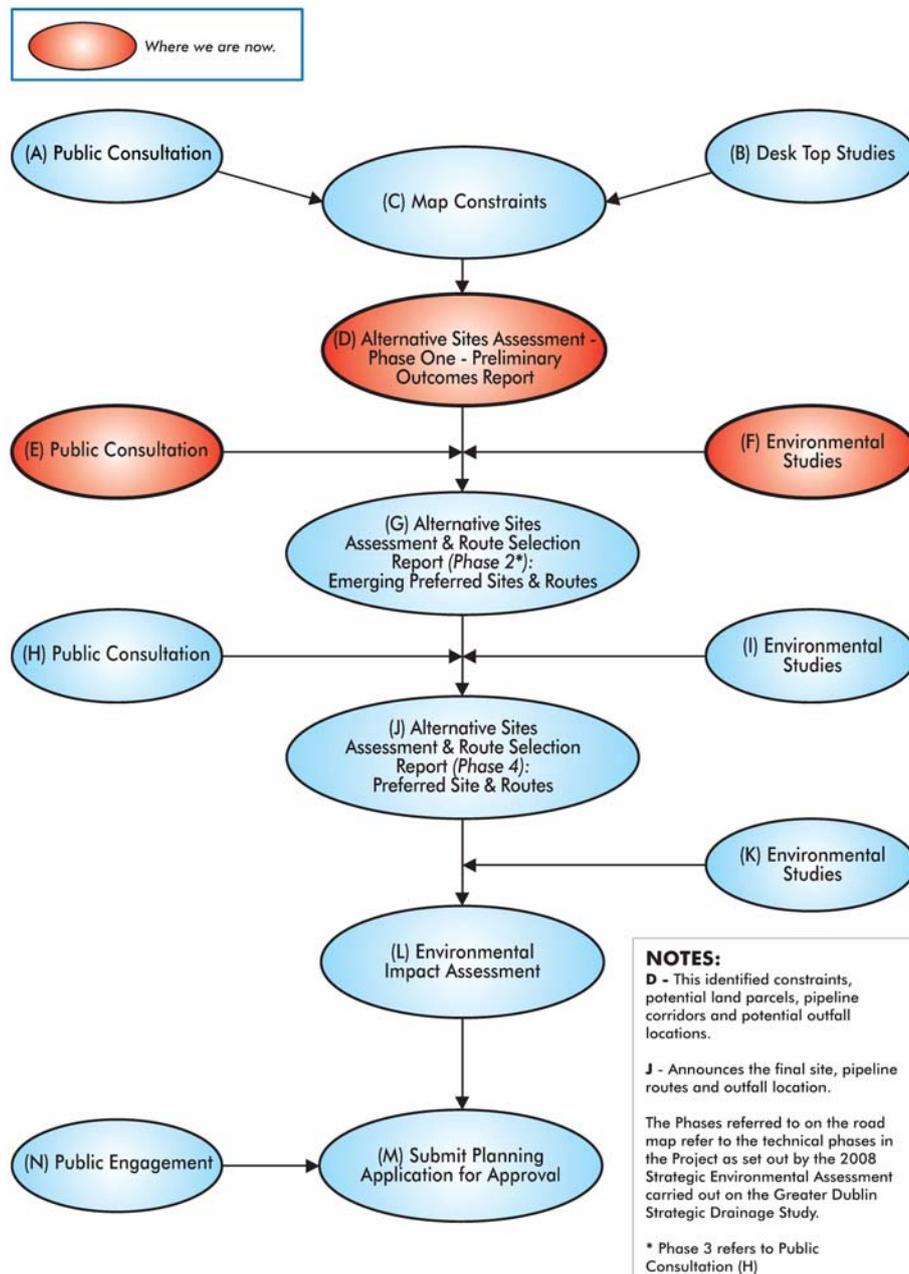
The Greater Dublin Drainage initiative involves the provision of:

- A new wastewater treatment works;
- A marine outfall; and
- A new drainage network in the northern part of the GDA.

Greater Dublin Drainage is about providing sustainable wastewater treatment for the Dublin region, as well as Counties Meath and Kildare from the Mid-East Region. Wastewater treatment and drainage infrastructure are essential to meet societal requirements for health and safety, prevent environmental pollution, and facilitate future economic development. Wastewater, if inadequately treated, could result in significant adverse health implications for the region and adjacent affected counties.

As the project develops there are a number of public consultation opportunities, which are set out in Figure 1.1. This report sets out the activities and feedback associated with the second phase of public consultation on the *Alternative Sites Assessment – Phase One: Preliminary Screening Outcomes Report, October 2011*. For clarity and ease of reference, this public consultation is referred to as the ASA Phase 1 Consultation in the remainder of this report. This public consultation stage is marked as “E” on the Project Road Map in Figure 1.1.

**Figure 1.1: Project Road Map**



### 1.1.1 Public Consultation 1: Constraints Consultation, May – June 2011

The first public consultation on Greater Dublin Drainage ran from 30<sup>th</sup> May to 24<sup>th</sup> June 2011 and focused on the constraints. Constraints are those features or designations, such as protected areas, in the landscape that might make an area unsuitable as a location for the project. The Project Team sought feedback on any constraints that should be considered as part of the initial selection process (the ASA process).

At the end of the six-week consultation period, all submissions were reviewed in their entirety by the Project Team in order to identify the key issues. The main issues that were identified by stakeholders and then considered as the Project Team moved towards the ASA Phase 1 Consultation included:

- Construction Impacts
- Consultation Process
- Ecology and Landscape Designations
- Energy Use and Requirements
- Health, Risk, and Nuisances
- Leisure, Local Amenity, and Visual Impact
- Location of the Outfall and Orbital Drain
- Planning Issues
- Site Selection Process and Selected Locations
- Sludge Management
- Social and Economic Factors
- Strategic Considerations
- Technology, Size, and Catchment of Plant

The full copy of the *Constraints Consultation Report* is available on the Greater Dublin Drainage website at <http://www.greaterdublindrainage.com/project-reports/>.

## 2 ASA PHASE 1 CONSULTATION (OCTOBER - DECEMBER 2011)

### 2.1 INTRODUCTION

Early engagement with stakeholders is an important aspect of infrastructure development and at critical points in the development of Greater Dublin Drainage, Fingal County Council will seek specific feedback from members of the public and organisations to assist them in shaping the project.

Fingal County Council ran an eight-week public consultation, from 10<sup>th</sup> October to 2<sup>nd</sup> December 2011, on the Alternative Site Assessment (ASA) Phase 1, which is the subject of this report. In October 2011, Fingal County Council published a report, entitled *Alternative Site Assessment Phase One – Preliminary Screening Outcomes Report*, and the conclusions of this report were brought out to consultation with the public. The report identified nine potential land parcels within which the proposed regional wastewater treatment plant (WwTP) could be located. It also identified pipeline corridors to and from the plant, as well as areas for a potential outfall to the Irish Sea.

This phase of public consultation was a very important part of the development of the project, as it offered a second opportunity for early engagement with members of the public and interested groups and organisations, as well as the opportunity for members of the public to share their knowledge of the area and local information with the Project Team. It will help the Project Team to further refine a number of emerging preferred sites for the WwTP.

The purpose of this report is to document stakeholder feedback and to ensure that the wider Project Team reviews and considers stakeholder issues, as appropriate.<sup>1</sup>

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<sup>1</sup> Fingal County Council has engaged separately and directly with each of the owners of lands included within the nine potential land parcels, as identified from available land registry information. Feedback received as part of the landowner consultation process is not included in this report; although not published it has been reviewed and considered by the Technical Team. Due to the confidential nature of this information, a formal report on landowner consultations will not be published.

## 2.2 CONSULTATION PERIOD

The eight week consultation ran from 10<sup>th</sup> October to 2<sup>nd</sup> December 2011. The consultation was originally due to close on 18<sup>th</sup> November 2011, but the date for receipt of submissions was extended in order to give stakeholders who were compiling detailed submissions more time to complete and submit their submissions. During the consultation period it became apparent that some communities had only just heard about the project with the announcement on 10<sup>th</sup> October 2011 and in order to consult as widely as possible, the date for receiving submissions as part of the non-statutory consultation was extended by two weeks, until 2<sup>nd</sup> December 2011.

This report documents feedback received during the formal consultation period, from 10<sup>th</sup> October to 2<sup>nd</sup> December 2011. It is important to note that stakeholders can make submissions or provide feedback at any stage in the project. Submissions received outside these periods of formal consultation are reviewed and considered, but may not be included in a formal consultation report.

## 2.3 TERMS OF REFERENCE

As part of the eight week public consultation, views were sought on the following questions:

1. What are the features of each identified land parcel that make it suitable or unsuitable as a potential location for the regional wastewater treatment plant?
2. What issues should be considered in deciding the location for the marine outfall?
3. What issues should be considered in deciding the routes for the pipeline?
4. How should these features be considered in the next phase of the project?
5. What other issues do you think need to be taken into account at this stage of the project?
6. How would you like to be involved or communicated with as the project progresses?

## 2.4 CONSULTATION GUIDELINES

As part of the ASA Phase 1 Consultation, Fingal County Council aimed to ensure that all engagement with the stakeholders:

- Was open and transparent;
- Demonstrated the stage of the project development;
- Ensured stakeholders were aware of the issues that were open for consultation during this phase; and
- Detailed how the stakeholder feedback will be managed and utilised.

## 2.5 PUBLICISING THE CONSULTATION

### 2.5.1 Media

Since the earliest stages of the project's development, the media have been used to help promote awareness of the project and to ensure as many interested stakeholders as possible are aware of the consultation.

#### 2.5.1.1 Advertising

As part of the process of ensuring a wide number of people were aware of the consultation process, Fingal County Council placed advertisements in local and national newspapers. The advertisement advised interested stakeholders of the consultation, including opportunities for engagement. A copy of the advertisement can be found in Appendix A.

The advertisement was placed in the newspapers shown in Table 1.1.

**Table 1.1: Advertising**

Date	Newspaper
11.10.11	Irish Times Fingal Independent
17.10.11	Irish Times
18.10.11	North County Leader
19.10.11	Northside People East Northside People West
25.10.11	Evening Herald
26.10.11	Blanchardstown Gazette Castleknock Gazette Malahide Gazette Swords Gazette
01.11.11	Metro Herald
02.11.11	Community Voice

### 2.5.1.2 Press Releases

In order to raise awareness of the consultation process and to ensure members of the public were aware of the opportunities to engage, a number of press releases were issued. The press releases listed in Table 1.2 were issued to national and local media.

**Table 1.2: Press Releases**

Date	Title
10.10.11	Fingal Co. Council Identifies Nine Potential Land Parcels for New Wastewater Infrastructure and Announces Further Public Consultation
11.11.11	Fingal County Council Extends Date for Receiving Submissions on Greater Dublin Drainage Project until 2 <sup>nd</sup> December to Facilitate Local Communities Making Submissions
18.11.11	The Myths and Facts about Greater Dublin Drainage
12.12.11	All Issues Raised in over 10,000 Submissions to the Greater Dublin Drainage Project will be Examined by Experts and Considered by the Project Team before Site Shortlist is Announced Next Year.*

\*Issued after the close of the consultation on 12<sup>th</sup> December 2011 to formalise the end of the consultation period and thank stakeholders for their participation.

Copies of each press release can be found in Appendix B.

### 2.5.1.3 Media Briefing

A media briefing occurred on 10<sup>th</sup> October 2011 in Fingal County Council's offices in Swords, as part of the launch of the ASA Phase 1 Consultation. Media from the following newspapers attended:

- Fingal Independent
- North County Leader

### 2.5.1.4 Resultant Media Coverage

As a result of the extensive public relations efforts to secure coverage during the consultation period, 50 print articles have been published about the project. The details of the coverage can be found in Tables 2.3 to 2.5.

**Table 2.3: Media Coverage, October 2011**

Date	Publication	Title
11.10.11	Fingal Independent	Nine Possible Sites for Fingal Waste Water Plant Identified
11.10.11	North County Leader	Flushing the Market Garden Down the Toilet
13.10.11	Malahide Gazette	Nine Sites Identified for Treatment Plant
13.10.11	Swords Gazette	Nine Sites Identified for Treatment Plant
15.10.11	Evening Herald	Nine Sites Picked for New Sewage Plant Plans
18.10.11	Fingal Independent	Calls for the "Tertiary Treatment of Effluent"
18.10.11	Fingal Independent	Extending Ringsend Site "Not Practical"
18.10.11	Fingal Independent	No Plans for Sewage Plant
18.10.11	Fingal Independent	Plant Site will be Chosen Mid-2012
18.10.11	Fingal Independent	Portrane Located within a "Highly Sensitive Landscape"
18.10.11	North County Leader	Triumph for People Power
19.10.11	Northside People East	Sites Identified for Wastewater Treatment Plant
20.10.11	Malahide Gazette	Calls for Locals to get Involved with Plant
20.10.11	Malahide Gazette	"Water Plant may be Negative for Beach"
25.10.11	Fingal Independent	Concerns Raised over Sewage Outfall at Beach
26.10.11	Northside People East	Warning Issued over Sewage Proposal

**Table 2.4: Media Coverage, November 2011**

Date	Publication	Title
03.11.11	Malahide Gazette	"Ringsend is Nearing its Maximum Capacity"
08.11.11	Fingal Independent	Cllr. Ask for Smaller Sites to be Considered
08.11.11	Fingal Independent	New Groups Join in Plant Protest
08.11.11	Fingal Independent	Standing Room Only as Hundreds Gather
08.11.11	Fingal Independent	Council has "Betrayed" the People of Lusk
09.11.11	Northside People West	Sites Shortlisted for Waste Treatment Plant
10.11.11	Swords Gazette	Opposition to "Monster" Water Plant
10.11.11	Swords Gazette	"Ringsend is Nearing its Maximum Capacity"
15.11.11	Fingal Independent	Fingal Council Urged to Retaliate
15.11.11	Fingal Independent	Locals are Kicking Up a Stink Over Plans
15.11.11	Fingal Independent	Minister Urged to Engage with Communities
15.11.11	Fingal Independent	Proposal is "Dangerous and Ill Thought Out," says Senator
15.11.11	North County Leader	Communities Galvanised Against Super Sewage Plant
15.11.11	North County Leader	Landowner Blasts Council
15.11.11	North County Leader	Sense of Isolation in Wake of Metro North Decision
17.11.11	Irish Times	Claim Minister has Given in to Pressure Over Water Service Bill
17.11.11	Malahide Gazette	Anger at "Rubbish Projects" for Fingal
22.11.11	Fingal Independent	Agreement to Extend Consultation Deadline
22.11.11	Fingal Independent	Battle Against Giant Plant Moves to Swords
22.11.11	Fingal Independent	GDD Wants to "Scotch a Few Myths" on Project
22.11.11	Fingal Independent	More than 1,100 Submissions from Concerned Citizens
23.11.11	Northside People West	Deadline Extended
24.11.11	Malahide Gazette	Facts on Need for New Regional Wastewater Treatment Plant
24.11.11	Swords Gazette	Facts on Need for New Regional Wastewater Treatment Plant
29.11.11	Fingal Independent	Family Moved on by Council 40 Years Ago Faces Same Fate Again
29.11.11	Fingal Independent	Is Fingal Seen as a Dumping Ground?
29.11.11	Fingal Independent	Minister Promises to Review
29.11.11	Fingal Independent	Ryan: Price Tag is too High
29.11.11	Fingal Independent	Unprecedented Alliance as North Dublin Towns Unite
29.11.11	North County Leader	Review Commitment on Super Sewage Plant

**Table 2.5: Media Coverage, December 2011**

Date	Publication	Title
01.12.11	Swords Gazette	Minister to Review Sewerage Plant
01.12.11	Irish Times	Opposition Grows to Dublin Sewage Plant
01.12.11	Irish Times	Sites Shortlist
05.12.11	Metro Herald	10,000 Object to Fingal Water Treatment Plans

\* Only covers one week after the close of the consultation to capture anything issued during the final week of consultation.

### 2.5.1.5 Online Coverage

A number of websites issued information or published materials about the project and the ASA Phase 1 Consultation on their websites. Although this was done on their own accord and not as a result of a request by Fingal County Council, it is important to note the awareness of the project was heightened as a result of these online posts. The websites that posted information include the following:

[www.98fm.ie](http://www.98fm.ie)

[www.ballyboughal.net](http://www.ballyboughal.net)

[www.boards.ie](http://www.boards.ie)

[www.build.ie](http://www.build.ie)

[www.donabateportrane.com](http://www.donabateportrane.com)

[www.dublinpeople.com](http://www.dublinpeople.com)

[www.facebook.com](http://www.facebook.com)

[www.fingal-independent.ie](http://www.fingal-independent.ie)

[www.herald.ie](http://www.herald.ie)

[www.labour.ie](http://www.labour.ie)

[www.luskwastewatchers.com](http://www.luskwastewatchers.com)

[www.myswords.ie](http://www.myswords.ie)

[www.northcountyleader.ie](http://www.northcountyleader.ie)

<http://paper.li/ParticipateUK/1308741431>

[www.skerriesca.com](http://www.skerriesca.com)

[www.skerriesnews.ie](http://www.skerriesnews.ie)

[www.twitter.com](http://www.twitter.com)

## 2.5.2 Information Service

From the outset of the project, an information service for engaging with stakeholders has been in place. The information service includes:

- Lo-call phone line: 1890.44.55.67
- Email service: [info@greaterdublindrainage.ie](mailto:info@greaterdublindrainage.ie)
- Postal service: Greater Dublin Drainage Project Manager, c/o RPS Group, West Pier Business Campus, Dún Laoghaire, Co. Dublin, Ireland

Stakeholders have utilised these methods of engagement throughout the consultation process. Full details of the feedback from the engagement can be found in Section 3. All feedback received within the consultation period through these methods has been reviewed and considered as part of this report.

Table 2.6 details the amount of engagement that has occurred during the ASA Phase 1 Consultation.

**Table 2.6: Engagement Figures**

Method	Numbers
Emails	726
Letters	6,091
Open Days (including written submissions handed to the Project Team)	766
Petitions	3 petitions, with 3,060 total signatures
Phone	45

## **2.5.3 Online: Web and Social Media**

### **2.5.3.1 Website**

A dedicated project website can be found at [www.greaterdublindrainage.ie](http://www.greaterdublindrainage.ie). The project website is updated regularly. New information regarding the ASA Phase 1 Consultation was added to the website as part of the project launch, including the *Alternative Sites Assessment – Phase One: Preliminary Screening Outcomes Report*, maps, and aerial photography. The FAQ section of the website was updated periodically throughout the consultation period to reflect queries raised by stakeholders.

On the website, interested stakeholders can contact the project team, access all relevant reports and documents, including press releases, and review project information and frequently asked questions.

### **2.5.3.2 Twitter**

Fingal County Council has a popular Twitter page with over 1,500 followers and this account has been used to promote the consultation on Greater Dublin Drainage. Six “tweets” were issued by the Fingal Twitter account to promote the ASA Phase 1 Consultation. The tweets can be seen in Figure 2.1.

Figure 2.1: ASA Phase 1 Consultation Tweets



## 2.5.4 Elected Member Engagement

In order to promote the consultation widely, Elected Members were sent an email that included the text from the first press release on 10<sup>th</sup> October 2011 announcing the ASA Phase 1 Consultation. It was sent to the all GDA elected representatives (except Wicklow), including:

- County Councillors
- MEPs
- Senators
- TDs

A briefing of this stage of the GDD project was given to Fingal's Councillors at their monthly Council Meeting on 10<sup>th</sup> October 2011.

### **2.5.5 Emails to Stakeholders**

Since the launch of the project in April 2011, stakeholders have been able to subscribe to project updates on the Greater Dublin Drainage mailing list. As part of this phase of consultation, all stakeholders who had subscribed to the project mailing list were sent information regarding the consultation by email.

The first press release entitled, "Fingal Co. Council Identifies Nine Potential Land Parcels for New Wastewater Infrastructure and Announces Further Public Consultation," was also emailed on 10<sup>th</sup> October 2011 to approximately 332 stakeholders, including all Elected Members and members of the public who had signed up to the GDD mailing list, in order to publicise the launch of the consultation.

The second press release, entitled "Fingal County Council Extends Date for Receiving Submissions on Greater Dublin Drainage Project until 2<sup>nd</sup> December to Facilitate Local Communities Making Submissions" and extended the consultation period, was also sent to all subscribed stakeholders. This was sent on 11<sup>th</sup> November 2011 to 633 stakeholders, including Elected Members.

Additionally, the "Facts and Myths" of the project were issued by email to all stakeholders who had registered to be part of the GDD mailing list and all Elected Members in the GDA (954 email addresses, including Elected Members). This was sent on 25<sup>th</sup> November 2011 and the text was the same as the corresponding press release.

The closing press release, "All Issues Raised in over 10,000 Submissions to the Greater Dublin Drainage Project will be Examined by Experts and Considered by the Project Team before Site Shortlist is Announced Next Year," was also emailed on 12<sup>th</sup> December 2011 and it was issued to 941 people, including Elected Members.

### **2.5.6 Project Brochure**

An update brochure, Greater Dublin Drainage Update: Issue 1, October 2011, was prepared for this phase of consultation. Provided in both Irish and English, it gave a brief background to the history of the project, its current status, and how stakeholders can participate in the consultation. A map of all nine proposed land parcels was also included. A feedback form was provided as an insert to the brochure, where stakeholders could write in their views on the project and post it into the Project Team. The brochure was distributed by Fingal County Council to all owners of lands included in the nine potential land parcels and to residences located in close proximity to the land parcels.

The brochure was available at the Open Days and in the Fingal County Offices throughout the consultation period. A copy of the brochure can be found in Appendix C.

### **2.5.7 Posters**

Posters promoting the consultation were issued to key locations in Fingal and the wider GDA (excluding Wicklow). All libraries in Fingal, including Balbriggan, Baldoyle, Blanchardstown, Garristown, Howth, Malahide, Rush, Skerries, and Swords, as well as the four mobile libraries, were issued posters for display. Also, the posters were placed in the Fingal County Council offices in Blanchardstown and Swords. The Local Authority representatives on the Steering Committee, who represent all GDA counties except Wicklow, received copies of the posters to display in their planning offices. A copy of the poster can be found in Appendix D.

### **2.5.8 Open Days**

Four public Open Days were held in order to provide an opportunity for interested stakeholders to engage with the Project Team to discuss any issues or concerns that they have about the project and to provide feedback on the nine land parcels, marine outfall locations, and pipeline corridors.

The details of the Open Days can be found in Table 2.7.

**Table 2.7: Open Day Details**

Date	Time	Location
22.10.11	11:00 – 4:00	Fingal County Council Offices, Swords
26.10.11	2:00 – 8:00	Fingal County Council Offices, Swords
03.11.11	2:00 – 8:00	Fingal County Council Offices, Swords
05.11.11	11:00 – 4:00	Fingal County Council Offices, Swords
<b>Total Attendees: 768*</b>		

\*Total number who signed in or were recorded by the Project Team, actual numbers were higher

A series of displays, in addition to the posters, were available at each Open Day for the public to review, including maps and aerial photography of the nine land parcels (Appendix E). Booklets of the constraints maps were also available to view by members of the public; copies of the maps can be found at <http://www.greaterdublindrainage.com/project-reports/maps/>. The Project Team, which included staff from Fingal County Council, RPS Group, Jacobs / Tobin Engineers, met with attendees and facilitated discussions using a facilitation sheet (Appendix F). The facilitation sheet asked attendees to consider the questions that were raised in the consultation terms of reference (Section 2.3).

The displays were erected in advance and left in-situ for the duration of the consultation following the event.

## 3 FEEDBACK

### 3.1 INTRODUCTION TO FEEDBACK

Each and every submission received by the Greater Dublin Drainage Team was logged and acknowledged. The sample acknowledgement letter and email can be found in Appendix G. All submissions were then compiled and reviewed in their entirety by the Project Team<sup>2</sup>. As part of the compilation of this report, the Project Team reviewed each submission in order to pull out the key issues in relation to the project. This section of the report will review the feedback received, in terms of issues raised by stakeholders as part of their submissions.

The report compiles all of the issues raised. Some of the issues are quoted directly from submissions but others are an amalgamation of issues raised by a number of submissions. Everything included in the ensuing sections is taken directly from stakeholder feedback. All issues are reported alphabetically and no bias is implied by the order in which they are presented. Additionally, in certain sections, comments made were related to specific land parcels. Where this has occurred, they have been collated for the relevant land parcel, if appropriate.

This report, together with the submissions, will be reviewed by the Technical Team as part of the project development.

### 3.2 FEEDBACK ON ISSUES

#### 3.2.1 Archaeology and Cultural Heritage

##### 3.2.1.1 General Issues

Cultural heritage, including archaeology, was a concern of some stakeholders. Some stakeholders felt that the “visual impact of a large scale wastewater treatment plant with stacks of up to 35m high would effectively obliterate protected views and have a deeply negative impact on the open, unspoiled and tranquil nature of these landscapes.”

Many stakeholders commented that there are 800 Protected Structures in the Fingal area with many of these located in the Lusk, Rush, Loughshinny, and Skerries areas, in close proximity to the proposed land parcels, and stated that “If the WwTP plant was built in one of these land parcels, then the amenity value of these protected structures would be significantly reduced.”

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<sup>2</sup> As this is a non-statutory consultation all personal data of the individuals who made submissions is being held in accordance with the Data Protection Act, 2003.

Many noted Baldongan Castle and the associated graveyard may be visually impacted by the project and that its “historical importance...should not be underestimated.” It was advised that “the vista that sweeps down...is one of Fingal’s loveliest, enjoyed by locals and tourists alike.” Ardgillan Demesne and Newbridge House were also noted as heritage areas that may be negatively impacted by the project. Along the coast, stakeholders noted concerns for the Napoleonic Martello Towers.

Some stakeholders felt that the 250m buffer zone for cultural heritage and archaeological sites “would not be sufficient” and would negatively impact on tourist visits, while another stakeholder commented that the proposed pipeline corridor routes will impact on the buffer zones as well. One stakeholder felt that Fingal County Council could not be trusted to manage a project like this and appropriately protect its heritage, having already “destroyed Kenure House and its Demesne.”

### **3.2.1.2 Land Parcel Specific Issues**

#### **Annsbrook**

Annsbrook was often noted in relation to archaeology, as stakeholders advised that the area had been “studied and documented” as part of a proposed landfill development and subsequently ruled out, due to archaeological remains and “cultural settlements” on the land. One submission advised that this land parcel is affiliated with the historic “Grace Dieu Priory” and that “potential archaeological features were identified on historic...maps,” including an “undiscovered bridge.”

Some stakeholders requested confirmation that the study that identified these archaeological sites, the *Dublin Landfill Study of 2004*, was being considered by the Project Team.

#### **Baldurgan**

Near the Baldurgan land parcel, stakeholders noted the old “Brian Boru Road” and requested that this be further examined by an archaeologist. A holy well was also noted nearby. Other stakeholders noted concerns about archaeological sites near Loughshinny, including the Drumanagh fort.

## **Cookstown**

Many stakeholders thought if works are undertaken that there will be many more archaeological sites in the area, given the known amount already there. Stakeholders felt this was especially true with regard to the four land parcels near Lusk (Annsbrook, Newtowncorduff, Rathartan, and Tyrellstown Little) and the Cookstown land parcel. For Cookstown, it was noted that due to its siting on rising ground there may even be sites like Newgrange, Knowth, or Dowth found there. Although unrecorded, a “large bank and ditched feature forms the boundary between Cookstown and Brownstown/Baldurgan... typical of a 17<sup>th</sup> century military fortification.” Viking sites were also noted in the Cookstown area, as were remnants of the “long vanished Cookstown House.”

## **Newtowncorduff**

In Newtowncorduff, it was noted that there is a moated site.

## **Rathartan and Tyrellstown Little**

Some stakeholders noted that there may be archaeological sites at the Rathartan land parcel, which could be linked to the pre-Christian burial grounds at Rogerstown.

Within Tyrellstown Little, a number of archaeological sites were referenced, including Knockdromin House, a “Fulacht fia,” and a habitation site. Details of their locations from the National Monuments Registry were provided. Tyrellstown Little and Rathartan were cited as having protected views, in the *Fingal Development Plan 2011-2017*, from the north at Baldongan Castle, from the west on the Lusk/Skerries Road, and from the south on the Lusk/Rush Road.

## **Saucerstown**

In Saucerstown, a building that requires further investigation as part of the National Monuments Registry was also noted.

### **3.2.2 Climate Change**

Many of the concerns raised about climate change related to its impact on agriculture, as some stakeholders noted concerns about “the raised threat to our food supplies from...global warming.” It was felt that a home-grown food supply is important in light of climate change-related challenges.

In addition to impact on agriculture, the impact of climate change on flooding was also reiterated as an issue by stakeholders, particularly in terms of the Saucerstown land parcel. A stakeholder commented that this proposed land parcel is “15ft above sea level and located on the flood plain of the Broadmeadow River...and therefore carries a heightened risk of flooding as global warming increases.”

One submission stated that “currently, there was NO reliable way of accounting for climate change; no estimates are taken into account...generally these plants are designed for a 1 in 5 year storm/rainfall, so in theory should only resort to discharging untreated effluent once every five years. However, there has been a 1 in 100 year precipitation event for the last four years in a row,” referring to the recent severe flooding, including the event that occurred in October 2011.

Climate change was also noted as a concern in relation to Ireland’s international commitments and it was suggested that a robust analysis of energy emissions from the proposed development and related transportation be completed. One submission made specific reference to energy consumption in terms of the plant’s operations, referring to a plant in Japan that has “developed a system powered by renewable energy” which they stated would be “more economic to operate.” Another stakeholder commented that “in this day and age it is irresponsible to be planning a plant of any size that does not have an energy source independent of electricity and gas.”

This reference to energy consumption was also made in relation to the proximity of the wastewater plants to load centres. One stakeholder stated the proposed development should be located nearer to load centres, given that that 390,000 (59.6%) of expected population equivalent (PE) load originates from the North Dublin catchment and 254,000 PE (38.9%) will be collected at Junction 6 on the M50 at Blanchardstown. Therefore, the “low energy solution” for transfer of 98.5% of wastewater would be to locate the WwTP closer to these sources.

The stakeholders also went on to comment that if the wastewater treatment plant and the outfall pipe are not located south of Swords, then the additional energy required to transfer the wastewater and effluent will “contravene two of the critical factors of energy conservation and minimisation of carbon emissions.”

### **3.2.3 Community Impact**

Stakeholders were also concerned about how the development would impact upon their communities. Concerns were raised that the WwTP would have a “detrimental effect...for many years to come.” These concerns often applied to Fingal as a whole entity, with stakeholders advising that the “Fingal brand” encompasses a number of characteristics, including “coastal zones, sensitive landscapes, and historic and archaeological sites” and this project represents a “clear and definite threat to the ‘Fingal’ brand.”

One stakeholder felt the “council is hell bent on making a fast buck” and should instead be promoting its “wonderful heritage, folklore, produce, and history” to the rest of the country.

Some stakeholders were more specific about their concerns for their own local community. Stakeholders raised the previous proposal for a development in Portrane, stating “we do not want it pushed to the next village down the road,” meaning Lusk. Stakeholders in Lusk were “horrified that Fingal County Council is bringing the plant to a historic village in County Dublin.” Stakeholders advised that when they moved to Lusk they wanted a “nice place to raise children...and this treatment plant will greatly affect this young community that is already struggling in these economic times.”

Stakeholders from Skerries also raised concerns about the project’s impact on their town, stating “we have a unique and very special community...we pride ourselves on the beautiful fishing village we live in...to take away from this in any form would be totally unacceptable.” It was felt that Skerries “is in many ways a model of how communities and towns in Ireland should grow and develop in the 21<sup>st</sup> century.” Many stakeholders noted that the “sea offers a sense of pride” to the inhabitants of the communities of Skerries, Rush, and Balbriggan; the impact on amenity and water sports will be discussed further in Section 3.2.9 (Landscape and Amenity) and Section 3.2.10 (Livelihood).

One stakeholder noted the impact the project would have on the wider community, stating, “the small core communities of Skerries, Loughshinny, Rush, and Lusk have retained a special character over the past two centuries and represent a distinctive, but fragile, culture. The reduction of the environmental and cultural quality inevitably associated with the proposed plant would sound the final ‘death knell’ of these unique, irretrievable qualities so rare in modern society.”

Some stakeholders noted concerns about the impact on the town of Swords if the land parcel at Saucerstown is chosen, as the project would have a “substantial negative impact...if given the go-ahead,” especially given the problems the existing plant has had on the town. It was stated that “to consider imposing another sewerage treatment plant on the town, on a scale ten times the existing plant, will not be tolerated.”

Other stakeholders felt that the project will cause a schism in the community, causing “families and friends to be split up and miles apart.” It was felt that by having nine land parcels out for consultation a “divide and conquer” approach had been taken. One stakeholder called for a reversal of any decisions to build the project in North County Dublin, “so that the people who live in this area, past, present, and future, can continue with the quality of life they deserve.”

Some stakeholders asked about any community gain that would be affiliated with the project.

### 3.2.4 Construction Impacts

Many stakeholders raised concerns about the construction impact of the WwTP, as they had negative experiences with other infrastructure developments in the area. Stakeholders noted that the development of the EirGrid East-West Interconnector in Rush “resulted in complete disruption of the town for residents and businesses over a prolonged period of time” and concerns were noted that the WwTP would have the same impact. Issues with access were raised, as well, as some stakeholders noted that their “main worry” would be limited access to the area during construction.

Pollution from substances associated with the construction process was also raised as an issue, with concerns about the potential for a range of serious pollutants to enter rivers during construction works. Examples of such pollutants were raw or uncured concrete and grouts, wash down water from exposed aggregate surfaces, cast-in-place concrete and from concrete trucks, fuels, lubricants, and hydraulic fluids for equipment used on the development site, bitumen and salines used for waterproofing concrete surfaces, and waste from temporary on site toilet and wash facilities. Pollution from suspended solids during construction was raised as an issue, due to its potential to impact on invertebrate and plant life, as well as fish.

It was felt that as land parcels at Annsbrook, Newtowncorduff, Rathartan, and Tyrellstown Little are all drained by rivers that flow into Rogerstown Estuary “there is a substantial risk of this increased sediment load adversely affecting its ecological balance.”

Dust, as a result of the construction project, was also raised as an issue, with one stakeholder noting that this dust will contaminate the locally grown crops.

Stakeholders noted noise concerns, as well. Proximity to schools, and the resultant noise from construction was raised as a concern, as it would “disrupt...learning activities and create a difficult learning and working environment.”

Concerns were raised about the impact of silt build-up due to tunnelling and construction on local beaches. It was noted that the Malahide Estuary “suffered greatly from excessive silt on the seabed” during other construction projects and that Baldoyle Estuary and Portmarnock Beach may experience similar problems due to construction of the outfall pipe.

The majority of the submissions regarding construction impacts were directly related to the traffic and access issues that may occur at each land parcel. Many of these issues are covered in Section 3.2.19 (Road Infrastructure and Traffic). In relation to Cloghran and Clonshaugh, it was noted that some local roads, including Baskin Lane, “could not withstand the heavy duty traffic...during construction.” Many stakeholders reiterated traffic and access issues with all land parcels due to the nature of most roads being secondary or country roads, whereby only one car can pass at a time, and existing traffic congestion issues on roads, such as the old M1.

#### **3.2.4.1 Existing Infrastructure in the Area**

Some stakeholders were concerned that there would be complications during the construction phase due to existing pipes and cables. A number of stakeholders felt that these were overlooked as part of the constraints, especially “the existing energy pipeline (gas transmission line from Interconnector 1 at Loughshinny) which crosses proposed pipeline corridors and at least one proposed site.” Other stakeholders noted concerns for the Annsbrook land parcel, which “already has a natural gas line cross the site with another pipe planned for the future.” It was also noted that there is already a natural gas pipeline cross the land and that the EirGrid East-West Interconnector follows the R129 from R132 Blake’s Cross to Ballyboughal and on to Oldtown. Concerns were noted that placing the WwTP on this land parcel could “inhibit access to these pipes and increase the cost of construction of the plant.” In Newtowncorduff, it was noted there are already ESB pylons on the land.

### **3.2.5 Ecology and Protected Habitats**

#### **3.2.5.1 General Issues**

Many stakeholders noted areas of protection that need to be considered as part of the project’s development, including Lambay Island, Skerries Islands, Rockabill, Malahide Estuary, Ireland’s Eye, the Balbriggan/Skerries Designated Shellfish Waters, and the Malahide Designated Shellfish Waters. The Ballyboughal River was also noted as an area of concern, as “brown trout and sea trout have been observed.” There were concerns that “in the event of a discharge of raw sewage” these areas would be at risk. It was felt that “surely these designations mean that” the areas are “to be protected and preserved.”

One stakeholder group highlighted the fact that Fingal County Council is supporting the rural development programme and felt that it “seems somewhat contradictory” to construct a WwTP in this area. Another stakeholder noted that “the Biodiversity Section of Fingal County Council has itself installed a sign at the end of the North Beach in Rush saying that this is a Marine Research Site and the subject of international studies.”

The *Regional Planning Guidelines* (RPGs) were cited by stakeholders as requiring best practice Habitat Direct Assessment (HAD) or Natura Impact Statements (NIS) and that these would need to be undertaken for this project, as it was felt that it has “the potential to impact on the Natura 2000 site in Rogerstown.”

In general, the areas of Loughshinny, Rush, Skerries, Lusk, Portrane, and Donabate were noted to be “environmentally sensitive areas.” Stakeholders felt it “makes no sense to locate such a plant in this area.” Specifically, the Portmarnock Dunes “contain marram and embryo dunes” and stakeholders were concerned that any development of an outfall pipe will result in these dunes being “undermined.” It was noted that there has been a lot of “good work...establishing and regenerating” the dunes and this project could threaten the area and lead to erosion. It was also noted that along this coast there is one of the “last remaining breeding sites in Ireland for the rare Roseate Tern.”

Stakeholders listed the species of wildlife on Lambay Island, stating that it supports the only breeding colony for Grey Seals on the East Coast and felt that “an outflow pipe of contaminated water would threaten the seals’ food supply.” It was stated that sensitive waters such as these “require better than secondary treatment.” Stakeholders also stated that there are two types of protected plant species on Lambay Island (hairy violet and meadow barley) and that it was the breeding ground for the protected Little Tern. Additionally, stakeholders noted concerns for the project’s impact on a number of SPAs, including Baldoyle Bay, North Bull Island, and Ireland’s Eye, as many protected species were noted on their shores and in their sand and mud flats. Additionally, North Bull Island was noted to be the “top site in the country for the light-bellied Brent Goose.”

Ireland’s Eye was also cited as supporting cliff maritime flora and is of national importance for breeding seabirds, including Fulmar, Cormorant, Shag, Lesser Black-backed Gull, Kittiwake, Guillemot, and Razorbill.

Red-listed species, such as the Curlew, Barn Owl, Yellow Hammer, Lapwing, Golden Plover, were all stated as being supported directly by the four land parcels in the Lusk area (Annsbrook, Newtowncorduff, Rathartan, and Tyrellstown Little). In addition, salmon, an Annex II species, were recently recorded in the Corduff River. Stakeholders raised concerns that local rivers could be impacted and noted that silt run-off during construction phase could impact the “salmon fry...found in the Corduff River.”

A number of protected flora and fauna were also listed. In the Rush and Lusk areas reference was made to the Hairy Violet and Meadow Barley, which occur at Rogerstown and are legally protected under the Flora Protection Act (1999). It was also stated that Rogerstown is a Sea Trout habitat.

Lamprey eels, an Annex II species were noted in the Corduff and Ballyboughal Rivers. Fish surveys carried out by the Eastern Region Fisheries Board (ERFB) at Ballyboughal also recorded Sea Trout.

A number of stakeholders noted concerns about the possible impact the project could have on protected species and areas. It was noted by many that "Rogerstown Estuary and the seas around Rush are breeding grounds for several species, including Brown Trout, Sea Trout, Sea Bass, and Brent Geese." As a significant amount of the feedback on ecology was in reference to the Shellfish Waters; this is detailed in Section 3.2.5.3 (Shellfish Waters).

A pNHA from Loughshinny north towards Skerries was also commented on, as it was felt it was not taken into consideration in the documentation provided by the project reports.

Some stakeholders noted their own previous attempts to develop in the area that were ruled out based on ecological reasons, with one stakeholder noting an attempt to build a footpath near Baldoyle Estuary, which did not get approval, stating, "if such a small project...is not viable, what chance has a tunnelling project under the estuary got?"

One stakeholder listed the damage they felt was already done to the area during previous projects, citing that "before the motorway went through we had long eared owls nesting and orchids growing on the land...and the peace and quiet was lovely but that is all gone."

### **3.2.5.2 Land Parcel Specific Issues**

#### **Annsbrook**

In Annsbrook, Common Buzzards have been noted to breed in the area and "up to seven of the birds" can be observed; Red Kites have also been seen near Annsbrook. Also in Annsbrook, partridge, pheasant, wood cock, red kite, egrets, buzzard, curlew, crane, and grey and green plovers have been spotted.

#### **Baldurgan**

Near Baldurgan, foxes, eagles, rabbits, ferrets, partridges, and pheasants have been noted.

## **Newtowncorduff**

In terms of the Newtowncorduff land parcel, stakeholders noted the presence of many protected birds, including barn owls, curlew, golden plover, lapwing, yellowhammer, tree and house sparrows, kingfisher, swallows, teals, woodcock, and buzzards. Bats were noted in the area as well, as were orchids. Another stated that “the land [at Newtowncorduff] is mostly grassland some of which has not been ploughed up for hundreds of years; the EU is now trying to preserve this type of grassland.”

## **Rathartan**

The land parcel in Rathartan was stated to have become home to two barn owls, which can be seen to be hunting in the area. The National Parks and Wildlife Service (NPWS) have also supported the release of the Grey Partridge in the Oldtown area through the *Rural Development Programme 2007-2013*.

## **Saucerstown**

In regard to the Saucerstown land parcel, stakeholders were concerned about “beavers, herons, falcons, kestrels, owls, ducks, and cranes.” Additionally, stakeholders noted that 40 Red Kites were recently released near the Saucerstown land parcel as well and were concerned for the project’s potential impact on the birds.

## **Tyrellstown Little**

For the Tyrellstown land parcel, one stakeholder advised that Red Kites, wrens, buzzards, Yellow Hammers, finches, dragonflies, bats, rabbits, and lizards have been observed, while another stakeholder recorded hares, hedgehogs, foxes, pheasants, and herons. Hawks, owls, white doves, frogs, and pigeons were noted in the area by another stakeholder. Stakeholders also noted concerns for a game preserve on the Tyrellstown Little land parcel, which is regularly used by members of a local game association.

## **Southern Outfall Location**

A number of stakeholders commented on the potential ecological impact on the Southern Outfall location as “the proposed route of the outfall is through/under the Baldoyle Estuary and Portmarnock Dunes.” Baldoyle Estuary is a designated Natura 2000 site, as well as a Ramsar Site of International Importance. A request for an “adequate Appropriate Assessment will be necessary before any development can be undertaken which would affect the site. The affect of tunnelling, and vibrations involved, on invertebrates, the food sources of the protected species, is not known, and it may prove to be fatal to the system.”

The Portmarnock Dunes were also cited as containing embryo dunes, Annex 1 Designated Habitats, as well as grey dunes, and Annex 1 Priority Habitat. It was also commented that these dunes “protect the golf course, housing and roadway from incursion by the sea” and there was concern that these dunes “will be undermined and that digging into the beach and foreshore will alter the currents and flows at the southerly end of the beach leading to erosion.” It was noted that alterations to the flow patterns around Sutton Creek occurred when trenching at Ringsend was undertaken.

Stakeholders felt that the project would be an “ecological disaster” for all of the species and habitats listed above.

### **3.2.5.3 Shellfish Waters**

There was extensive feedback from stakeholders regarding the Department of the Environment, Community, and Local Government’s Shellfish Waters designations off the coast of Rush, with many querying the gap in the protected areas. Stakeholders noted that there was an “arbitrary exclusion of the recreational waters between Skerries and Rush as a constraint...as a basis for screening out locations for outfall pipes.” Other stakeholders noted that this area should be treated as “an implied designation” and that it is “recognised as a Fishing Production Area for Razor Clam Shellfish by the Marine Institute.” It should, therefore, be considered “a constraint in line with other constraints for recreational waters, bathing locations, and designated shellfish waters.”

One stakeholder commented, in relation to the proposed outfall locations lying outside the Shellfish Designation areas, that “does anyone imagine that waste will not be carried by tides and currents, into these shellfish grounds or that fish will not intrude into the outfall area?”

Stakeholders raised concerns about the proposed locations for the outfall pipe; they felt that these were located in “sensitive marine areas which are bordered closely by areas of conservation. There are no barriers in the sea to prevent contamination from spreading to these areas.” A number of stakeholders were concerned about the impact of a potential “accident with the plant resulting in raw sewage being emitted” on the Shellfish Waters.

Additionally, a number of stakeholders raised concerns about the raw sewage that is currently being pumped into the sea off Rush. Stakeholders noted that Fingal County Council has a licence from the Environmental Protection Agency (EPA) to discharge the raw sewage from the town of Rush directly into the Irish Sea at Rush Harbour and that this licence remains in force until the 31<sup>st</sup> December 2014. It was felt that there is no certainty that raw sewage discharges will cease at Rush after this time, as there is no requirement to monitor as part of the licence.

Another stakeholder raised concerns that the shellfish areas would be “under threat from faecal contamination and heavy metals into the waters from the outfall pipe” and that this could “lead to contamination of food supply” and “reputational damage to east coast fisheries” industries.

Stakeholders also raised concerns about the impact of the outfall location on the “thriving inshore shell-fishing industry” at Rush and Loughshinny and that “all inappropriate discharges either current or planned in the Rush/Loughshinny inshore coastal zone” should “cease immediately and the Blue Mussel beds off Rush Harbour be designated a Shellfish Protected Area by the Irish Authorities in the interests of public health and to protect these fishing grounds into the future.”

### **3.2.6 Flooding**

#### **3.2.6.1 General Issues**

Flooding was a concern of many stakeholders, especially in relation to many of the land parcels. Stakeholders commented Ballyboughal, Baldurgan, Annsbrook, and Cookstown are “locally known flood plains” and have suffered severe floods in the past, as the rivers back up into the village.

As previously stated in Section 3.2.2 (Climate Change) flooding was also raised as an issue in relation to impact of climate change on flooding.

In addition to the concerns for increased flooding as a result of building in the flood plains, stakeholders noted concerns that the WwTP could itself flood, “resulting in untold environmental damage in the local area,” with one stakeholder enquiring whether Fingal County Council will be responsible for sewage on the land as a result of the WwTP backing up and flooding.

### 3.2.6.2 Land Parcel Specific Issues

#### **Annsbrook**

Stakeholders also noted the Annsbrook land parcel is situated between two rivers that “are particularly prone to flooding...during periods of heavy rain and moderate rainfall combined with high tides.” Despite past dredging of the two rivers, they continue to flood. It was felt that flooding has become worse to the south-east of the Annsbrook land parcel since the construction of the motorway. It was noted that “any excess building on this site could cause serious flooding to residential properties upstream.”

#### **Newtowncorduff**

One stakeholder felt that any development on the Newtowncorduff land parcel will “cause more flooding in the future from the main river.”

#### **Saucerstown**

Stakeholders raised concerns that the land parcel in Saucerstown is “located in the flood plain of the Broadmeadow River” and is “notorious” for flooding, with “more than a foot of water.” Stakeholders advised that there are local springs on the Saucerstown land parcel that contribute to the high water table and common flood problems. Although improvements have been made to the flooding situation through river widening and deepening, the risk of flooding remains; the recent *Fingal East Meath Flood Risk Assessment and Management Study* (FEM-FRAMS) proposes flood defences in the area, thereby “recognising the flood risk to this site.”

#### **Tyrellstown Little**

Near the Tyrellstown Little land parcel, previous flooding was noted along the adjacent rail line and to the west of the land parcel. It was noted that during October 2011 the area was “extensively flooded.”

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## **3.2.7 Geology and Soils**

### **3.2.7.1 General Issues**

Stakeholder concerns for the impact on soils generally related to the impact on agriculture; this is covered in Section 3.2.10.1 on Agronomy, Agriculture, and Horticulture. Many stakeholders made submissions, however that noted the entire coastline from Skerries to Rush is a Geological Heritage Site that must be considered as part of the review process, while a number of land parcel-specific issues were raised and are detailed in the following section.

### **3.2.7.2 Land Parcel Specific Issues**

#### **Annsbrook**

Stakeholders noted that the Annsbrook land parcel had “possibly significant underlying bedrock” of shale, which is unsuitable for development and should, therefore, be considered as part of the assessment.

#### **Rathartan and Tyrellstown Little**

It was also noted that “the areas of Rathartan and Tyrellstown have heavy clay soil” and that the development of the areas near here could lead to increased flooding due to the soil’s poor drainage qualities.

#### **Northern Outfall Location**

It was commented that the North Beach in Rush has a large strip of flat rocks called the Carlyan Rocks, which are “unique on the East Coast of Ireland” and they feel should be listed as a Special Area of Conservation, and were concerned that they would be destroyed if this project were to proceed.

### 3.2.8 Health

Some stakeholders noted concerns that the proposed WwTP “will have a detrimental effect on...health” and will “result in serious health problems.” Some stakeholders worried about the impact on health based on “air borne pathogens from this plant,” as well as “aerial endosphere bacteria,” noting these are a “major health threat.” It was noted that “there is evidence to suggest a risk for non occupational exposure to sewage from treatment plants” through inhalation of bacteria or particles. One stakeholder advised that that the “emission of noxious fumes...would aggravate the existing problem of Asthma and Chronic Obstructive Airways Disease in the local population.”

There were also concerns that “children will be inhaling particles of sewerage.” Specifically, requests were made for “any studies carried out in relation to the potential health implications to young children growing up near to such a site.” Some stakeholders noted their own existing health problems, such as cancer and breathing problems, and asked how the project will impact on them.

The potential health impact of aerosols generated from contaminated liquids produced from the WwTP was also cited as an issue, as it was felt the microorganisms could be carried in the aerosols produced by the plant, and these could cause pathogens that could “initiate infection in the respiratory tract and cause gastro intestinal infections.” A further concern was the possibility that “contamination will enter the human food chain” as a result of the spread of aerosols by the wind on produce growing close to the WwTP.

Health impacts as a result of pollution from the outfall were also cited as an issue. It was felt the *ASA Phase 1 Report* has “completely overlooked” the presence of a very active wild bivalve fishery in this area for razor clams. It was stated that as this species also filter feeds, it has the same public health hazards associated with it as other shellfish and “contamination from a sewage treatment plant would pose an extremely high risk to human health.” The Marine Institute carry out a National Screening Monitoring Programme for Biotoxins for all bivalve production in coastal areas around the country. Biotoxins are severely debilitating toxins produced by phytoplankton which can cause diarrhoea, vomiting, nausea, numbness, loss of short-term memory, muscular paralysis and death. The toxins monitored are namely Diarrhetic, Azaspiracid, Paralytic and Amnesic Shellfish Poisonings.

Many stakeholders raised the issue of health impacts as a direct result of overburdening in the area. They felt they had suffered extreme stress from other infrastructure projects that had occurred in the area and now they had a new one to worry about. One stakeholder noted that they were “finding this matter very stressful and as someone who has already suffered a heart attack I am very worried about my own health.” Another landowner commented that they had experienced the construction of the a motorway and have two gas pipelines through their farm as well as three ESB pylons, and the stress she had seen her husband going through as a result of all these projects is “terrible.”

In general, stakeholders felt that in relation to this project “the health and well being of the community should come first.”

### **3.2.8.1 Health and Odour Impacts**

One stakeholder group raised the connection between odour and health, stating that a “series of good quality epidemiological studies carried out over the last five to ten years have clearly established direct effects of noxious odours on human health (Heaney et al.2011; Schinasi et al. 2011; Aatamila et al.2011; Wing et al.2008).” Odour impact is assessed in greater detail in Section 3.2.12 (Odour).

### **3.2.8.2 Vermin**

An increase in vermin was noted as a concern by many stakeholders in relation to the risk to public health. Stakeholders noted that the WwTP could “lead to an explosion in the population of mosquitoes, flies, and other nuisance insects” as they “would be attracted by the nutrient-rich water found in clarifiers, sedimentation areas, and treatments basins.” They “cause a health risk to residents and visitors to the area” in terms of the diseases they might carry, such as West Nile Virus and Encephalitis. It was noted that mosquitoes have been recognised as a “public nuisance in Rush/Portrane/Malahide areas for decades” and the proposed WwTP will be near “a notorious mosquito breeding ground.” Additionally, stakeholders mentioned that the Ringsend Plant “reported increased numbers of flies at times.” Some stakeholders asked for the public health risk of this should be considered as part of the project’s development.

An increase in gulls was also noted as a concern, as they “will be feeding off the sewage,” as was an increase in rats.

## 3.2.9 Landscape and Amenity

### 3.2.9.1 General Issues

Landscape and amenity was an important issue for many stakeholders, as one stakeholder stated “the beaches are the playground of our children, a walkway for our adults and an unparalleled recreational facility for all residents to enjoy.”

This issue was inextricably linked with the quality of life of those communities in North Dublin (Section 3.2.3 Community Impact) and their livelihood (Section 3.2.10 Livelihood).

Many stakeholders stated that Rush is considered as the “surf capital of the East Coast” and others stated that it was the “second favourite destination for water sport enthusiasts on the East coast,” with three kilometres (km) of sandy beaches. Others cited the many amenities, such as surf and sailing clubs that are located in the area as result of the landscape and coastline.

Many submissions commented on the potential impact of the project on the visual landscape, stating that “the quiet back lanes of Lusk and Rush are very popular with walkers, cyclists, runners, horse riders and berry pickers, who can safely enjoy the beauty and tranquillity of the surrounding landscape and wildlife”, and that “the visual impact of a large scale Wastewater Treatment Plant...would effectively obliterate protected views and have a deeply negative impact on the open, unspoiled and tranquil nature of these landscapes.” One stakeholder highlighted that the importance of landscape and visual amenity are recognised in the Planning and Development Act 2000 and this should be considered.

The impact on roads as an amenity was also raised as an issue as “many roads around Lusk and rural Fingal area are important recreational facilities, for walkers, cyclists, and motorists.” One stakeholder stated there was a concern that the “likelihood of bad odours from sewage treatment plants will threaten the enjoyment of users of a number of golf courses in the area.

The *Fingal Development Plan 2011-2017* was also cited in reference to protected views and was quoted as stating that “the protection of this asset is therefore of primary importance in developing the potential of the county. Given the high rates of economic and population growth, the challenge the county faces is to manage the landscape so that any change is positive in its effects, such that the landscapes we value are protected” and it was felt that the project would contravene this element of the *Fingal Development Plan 2011-2017*. It was felt that the construction of a WwTP in any of the four land parcels near Lusk would breach the *Fingal Development Plan 2011-2017*, as it would contravene the principles that it set out for development of protecting the skyline and retaining and managing existing roadside hedgerows and tree belts.

Some stakeholders stated that the *Fingal Development Plan 2011-2017* has a goal to “protect, enhance, and sustainably manage the coast line and its natural resources,” while also highlighting the importance of conserving biodiversity, geological heritage areas, such as the Skerries to Rush Coastline, and the landscape, in general, in terms of its inherent and unique character. It was felt that the proposed development would be detrimental to these goals and designations.

Certain areas were mentioned by stakeholders, such as the Loughshinny Coast, which is a proposed Natural Heritage Area (pNHA) and a Water Framework Directive Register of Protected Areas Site (WFDRPA); Skerries Island is a Special Protection Area (SPA), National Heritage Area (NHA), and WFDRPA. Portrane Shore is a pNHA and WFDRPA, while Lambay Island is a SAC, SPA, pNHA, and WFDRPA.

A stakeholder went on to state that the “imposition of a wastewater treatment plant on any of these sites would effectively industrialise the area and have a profoundly negative impact on the natural landscape and wildlife.”

In addition, stakeholders felt that there was a lack of information available in terms of “the number or height of buildings or structures to be located on the site, which may include flues, drying towers and/or stacks of up to 30m in height” and that this made it difficult to gauge what the impact on the landscape would be.

### **3.2.9.2 Land Parcel Specific Issues**

#### **Annsbrook and Newtowncorduff**

The Annsbrook and Newtowncorduff views were also cited as being protected in the *Fingal Development Plan 2011-2017*, from north on the R132, the Lusk/Ballyboughal Road and the M1 motorway.

In addition, the land parcel at Annsbrook was referenced as being beside the Sli na Sceacha, a National Heritage-funded trail, and that the construction of a WwTP on this land parcel would impact severely on this trail.

### **Rathartan and Tyrellstown Little**

Tyrellstown Little and Rathartan have protected views from the north at Baldongan Castle, from the west on the Lusk/Skerries Road and from the south on the Lusk/Rush Road. Murtagh's of Ballough was also noted as having a protected view over the sea.

### **Coastal Areas**

It was felt by many stakeholders that skylines, horizons, ridgelines, and the seaward side of coastal roads should be protected by preventing inappropriate development.

Some stakeholders raised concerns about the impact of the project on "lands zoned 'to preserve and provide open space and recreational amenities.'" This was in reference to the Saucerstown land parcel and it was felt that developing it for the WwTP would result in the loss of a "much needed resources for sports and recreation," including the proposed "Swords Regional Park, the best park Swords will ever see," as the lands chosen sit on the same proposed land parcel. Two local golf courses, Roganstown Golf Club and Swords Open Golf Club, were specifically noted in this area as previously having been designated as part of the Green Belt Area (1999) Integrated Tourism/Recreational Complex plans. It was felt that the buffer zones for the proposed WwTP are too close to the golf courses and contravene the objectives of this zoning.

The *Fingal Development Plan 2011-2017* was again quoted by stakeholders, with stakeholders advising that in areas of High Amenity (HA), "a regional wastewater treatment plant is not permitted...and is not included in the list."

### **3.2.10 Livelihood**

Livelihood was one of the most common issues raised by stakeholders, as many stakeholders were concerned about how the project may negatively impact on a number of sectors, including agriculture, fishing, and tourism.

### 3.2.10.1 Agronomy / Agriculture / Horticulture

The impact on agriculture and horticulture was one of the most common issues raised, with concerns for Ireland's "strategically important" "Market Garden" appearing regularly in submissions. The "farming cultural heritage" of the area was important to stakeholders, but they were particularly concerned about the proposed development's impact on the agricultural land, as well as the perception of the produce from the area if located near a WwTP.

Many stakeholders identified Rush as an area that will particularly be impacted, stating "Rush is one of Ireland's most important horticultural areas" and this project "will poison the land which is a major provider of fresh fruit and vegetables for the entire country." Annsbrook, Newtowncorduff, Tyrrelstown Little, and Rathartan were also noted as "strategically important for national food production" and stakeholders felt that if this WwTP is built there will be a "loss of crops...loss of income for farmers and families and loss of jobs as a result." For Rathartan and Tyrrelstown, it was noted they are listed as part of the *Fingal Development Plan 2011-2017* to promote agri-tourism and that "the provision of agri-tourism would be challenging" near the proposed development. Near Cookstown, it was advised that the project would be "devastating...as our livelihood depends on the land."

Stakeholders noted that "the best...vegetables" are produced in Fingal and asked "how the Council could consider taking some of the best land in the country for this use?" Stakeholders noted that agriculture is important to Fingal in terms of "economy and way of life." It was commented that the 2011 retail value for fresh produce according to Bord Bia was €1.18 billion with vegetables accounting for €505 million (m), fruit €14m, and potatoes €50m. Approximately 75% of all fresh horticultural produce grown in Ireland is from the Lusk/Rush/Skerries area and that this project could jeopardise this revenue.

The loss of the land was a major concern, with stakeholders stating "Fingal is blessed with some of the most fertile and productive land in Ireland and "to decrease the land available for this business would have a severe negative impact on our economy."

In addition, stakeholders noted the importance of locally grown agriculture in a period of uncertain food supply. One stakeholder advised, "in an era where food security is going to be of increasing importance, we are a country that imports too high a level of our food to destroy a large area of highly productive farmland with this plant and its associated works is failing both the current and future generations." Another stakeholder reiterated that sentiment, stating "we see famine and hunger around the world and if we do not protect our growing sources then we do a disservice to future generations by the expediency of the now."

As well as the production of fruit and vegetables, it was also commented on that this area of Dublin was also home to hi-tech agri-food economy, and some of the local companies are leading manufacturers and suppliers of vegetable accompaniments and prepared meals. It was stated that they produce “in excess of 75,000 meals every week and produce 75% of the national onion crop” supplying Tesco, Dunnes Stores, Superquinn, Marks & Spencer, Spar, and Londis. It was felt the continued investment in these agri-food facilities would be jeopardised if there was any pollution risk to the water, soil, or crops.

Serious concerns were noted that “perceptions are important” when it comes to buying vegetables that were grown near a WwTP, with stakeholders stating “this will decimate the industry...shops will not want to buy vegetables grown around sewers.” It was stated by some that they are aware of a policy in Britain where large buyers, such as grocery stores, have “employed a policy of not purchasing fresh produce from growers within a 15 and, in some cases, a 25 mile radius of a plant of this magnitude,” which could lead to a “sorry end to a thriving industry” if employed in Ireland. It was felt that Fingal’s “reputation...as the breadbasket of Ireland” will be severely damaged with the development of this proposal and that the “nationally established consumer food products...cannot afford to take any risk of product or reputational damage.” It was felt that the “proposed development could wipe out local farmers.” One stakeholder, who grew potatoes and grain, felt that the reputation of the crops would be “destroyed forever” if the WwTP was placed near the farm.

The perception issue was also made in relation to consumer choice. It felt that the “co-location of a sewage plant with a crop of fresh vegetables doesn’t sit well with the consumers’ image of fruit and vegetables being a healthy part of their diet. They may switch their purchase choice away from Fingal fruit and vegetables to produce from outside the area.”

In addition to the impact the project could have on crops, stakeholders raised concerns about how the project will affect any leasing or tenancy agreements. One stakeholder advised that if the project goes ahead, they “may have difficulty leasing” their farmland in the future, thereby placing their “annual income...in jeopardy.” Some landowners advised that if partial elements of their farmland were taken for the project, the farm as a whole will become “unviable.”

Some stakeholders noted that it was not just their own livelihood that they were concerned about, but also the staff they employed on their farms as well. One stakeholder noted that they “have made a considerable financial investment in providing allotments for the surrounding community” and this project will negatively impact that business. Other stakeholders reiterated the importance of the allotments, stating that people “relish the chance to grow healthy, organic produce for their families in uncontaminated soil, and it is a wonderful place to spend time with our children in the fresh air.”

Another stakeholder noted a local shop that specialises in fresh produce from local farms and will be forced to cut staff if produce cannot be sourced locally due to the WwTP.

Additionally, the impact on the associated distribution network for horticulture should be taken into consideration, as this network “employs several thousand people directly and indirectly” and that North County Dublin is the distribution hub for fresh fruit and vegetable in Ireland. It was noted that “these logistic operations are centred on a small number of very large distribution centres with highly sophisticated electronic ordering systems...loss of horticultural activity would mean huge knock-on job loss in the distribution sector locally.”

Some stakeholders asked for guarantees that “crops will not be contaminated by this new WwTP” and asked if Fingal County Council would “take on the obligation of compensation if...crops are contaminated.” One stakeholder advised that they used local rivers and wells (near the Annsbrook land parcel) to water their crops and if this was accidentally contaminated they would have to “stop growing crops.” Stakeholders also asked how the project will affect REPS memberships, Bord Bia certifications, and organic certifications, querying “does proximity to such site negate their organic status?”

Some stakeholders noted specific crops and animals that may be impacted by the project. One stakeholder advised that bees would be negatively impacted by the project. As a beekeeper near the Lusk area, it was advised that if the project goes ahead “I will no longer be able to keep bees in the area” because “bees forage within a three mile radius of their hive location” and, therefore, their “health and habitat” will be negatively impacted by the project.

It was noted that “the market garden ecology was not considered in this survey” and building the WwTP on agricultural land “does not demonstrate good stewardship. It was felt this was an oversight in the constraints process, as agriculture and horticulture should be considered a “national strategic constraint.” Some stakeholders felt that “the proposed siting of a Regional Wastewater Treatment Plant on such valuable, prime agricultural land would be in direct contradiction to the objectives and aims of Fingal County Council’s own Development Plan 2011-2017.”

Stakeholders were not simply concerned about the project’s impact on fruit, vegetables, and grains, but also for its possible impact on livestock, venison, and horses. One stakeholder noted that they have “a suckler herd and breed racehorses” and any impact on their farm would be detrimental to their livelihood.

Stakeholder also raised concerns about the “future development of the Irish Agri-Food Industry” and felt that this project could “jeopardise” the ambitious targets set out in the *Food Harvest 2020 Report*.

It was requested that as part of the EIS “a detailed agronomic study” needs to be included. One stakeholder felt that there was not a full appreciation of agriculture as part of this process, noting “I fear your lack of understanding of the consequences this plant will have for the market gardening industry in the Fingal area will lead to foolish decisions.”

A specific issue that was raised by landowners was in relation to compensation and how the wayleave process would occur, with one stakeholder stating that if lands are acquired by compulsory purchase order (CPO) it would be a “further breach of civil and human rights.”

### **3.2.10.2 Fishing and Navigation**

Fishing was a very prominent issue raised by stakeholders, who noted not only their concerns about the potential environmental impact, but also the impact on the livelihood of fishermen in the area who depend on the sea for their living. Stakeholders noted that their communities have been living off the sea for “generations” and that “it is a way of life in this part of the county.”

It is important to note that many stakeholders raised issues in relation to the Shellfish Designations and these issues are covered in Section 3.2.5.3 (Shellfish Waters).

Stakeholders advised that there many animals living in the waters off the Fingal Coast, including crab, lobster, velvet shrimp, razor clams, and mussels. Stakeholders noted that the waters are “richest” with these species between Lambay Island and the Skerries Island, which was “grossly overlooked.” Stakeholders also advised that “the seas around Rush and Rogerstown Estuary are breeding grounds for Brown Trout and Sea Bass” and asked how the project will impact on cod stocks, which are already in danger. It was also noted that “the area between Rush and Skerries is designated by the Marine Institute for Razor Clam Shellfish production” and that this “renders the area unsuited for the proposed plant.”

It was further commented that one commercial fishing boat along the coast of Rush “extracted 2,200 tonnes of mussels last year alone,” thereby demonstrating the importance of this area’s one of “the most bountiful areas along the Leinster coastline for shellfish.”

The importance of revenue generated by Razor Clams was also cited. They are dredged from the seabed and are highly prized as a delicacy in France, Italy, and Spain, as well as South East Asia, and that it “is currently worth over €1.8 million...to the Irish Fishing industry and provides considerable employment in the fishing and fish canning and processing industries.” The coastal area from Rush as far as Clogherhead was indicated as having been an established Razor Clam area and that it should be considered in terms of constraints, as the northern outflow overlies the razor clam fisheries, and poses a risk to the “integrity of the Shellfish Waters.”

Stakeholders noted concerns that the water quality will diminish due to the outfall, thereby killing fish in the Irish Sea and “resulting in loss of earning, poverty, and an end for our fishing community.” It was felt that “the marine outfall and orbital drainage system would effectively wipe out the fishing industry along the whole East Coast.”

In addition, stakeholders raised concerns about the potential impact of the outfall on fisheries arising during normal operation, with one stakeholder stating that “normal releases from the Northern Outflow will have their impact both on this beach and the shellfish protected beaches of the rest of the coast” and that “no matter what is said, accidents will happen,” Another noted that “pumping vast quantities of secondary treated waste water into the sea between Rush and Loughshinny will destroy the shellfish areas all along the Fingal coast.”

One stakeholder also suggested amendments to the outfall design, such as the use of “submarine pipe” and increasing the length of the outfall pipe to protect the local fishing industry.

The impact of the fishing industry on the cost of the project in terms of the discharge point was also commented on, as it was felt the “additional cost of laying the marine pipeline through the shellfish fishery will be significant.”

### **3.2.10.3 Tourism**

#### **General Issues**

The potential negative impact on tourism was commonly raised as an issue, with stakeholders feeling the project would do “unimaginable damage” to the tourist industry because “sewage plants are not a tourist attraction.” It was advised that “the proposal...is in direct conflict with the stated objective for the development of Fingal as a tourism resource.” Stakeholders noted the numerous amenities the region offers and were concerned that tourists would not visit the area if the WwTP is built.

Stakeholders in Rush noted that there are “over 3km of sandy beaches” that “attract tourists from all over Ireland for water sports, including surfing and kitesurfing.” Others noted that “Rush can also be considered the surf capital of the east coast” and could be the “Lahinch” of the East Coast, if properly developed. Stakeholders were concerned that the “south beach does not even seem to exist” on the maps. Stakeholders stated that the “businesses of Rush are heavily dependent on holidaymakers and ‘day-trippers’ and they were very concerned that “our most valuable amenity (our beaches) would no longer be suitable...destroying tourism.” It was stated that “the more you insist on dumping on the town makes it a little less attractive to potential visitors.” Camping locations were noted, with the “North Beach Caravan and camping site in Rush” as a potential area that would be impacted.

It was also commented that the “businesses of Lusk/Rush and Skerries are heavily dependent on holidaymakers and day-trippers during the winter and high-season. Any decision to locate a major regional sewage treatment plant to the locality would have irreversible social and economic consequences for tourism industry in north Fingal.”

Other tourism businesses were noted as well, with concerns that the project will affect “the local hotel and golf courses greatly.” Stakeholders noted concerns that “bookings for B&Bs, caravans, and hotels” will be decimated.

Loughshinny was also noted to have “very active sailing” and “diving...clubs.”

Many stakeholders were concerned about the project’s impact on the town of Skerries, where people travel to in “large numbers...to admire the views and breath in the fresh sea air” during the summer months.

One stakeholder highlighted the international impact this project will have on tourism, stating “as an expatriate of Ireland...I have endorsed these communities as holiday destinations to numerous colleagues and friends...if this project proceeds I will certainly be revoking my commendation.” Another stakeholder stated that “the thought of a proposed sewerage plant located there has given me second thoughts as to holiday here again.” It was felt that “those in power should be doing all to enhance tourism and amenities for the public, not turning them into tourist blackspots.”

Some stakeholders felt that tourism should have been included in earlier stages of the constraints process, with one stakeholder asking that “tourism should be on the screening report.”

## Land Parcel Specific Issues

### Saucerstown

The Saucerstown land parcel was mentioned as having a Bord Fáilté holiday home nearby, which would be negatively impacted by the project. There are two golf courses near Saucerstown, the Swords Open Golf Course and Roganstown Golf Club, which stakeholders were concerned about, as the area has become “a magnet for golf...tourists.” One stakeholder advised that these were “designated in an Integrated Tourism/Recreational Complex in Green Belt Areas” and any development near these golf courses would “severely damage the business.” In relation to the golf courses in the area, one stakeholder commented that “the inflow sewer pipe will traverse one of the golf courses, thereby making it unplayable during pipeline construction.”

### Cloghran and Clonshaugh

For the Cloghran and Clonshaugh land parcels, their proximity to Dublin Airport was noted, as Ireland’s busiest airport, the “desirability of locating a significant wastewater treatment plant adjacent to the airport and its access routes must be considered.” Another stakeholder noted concerns that “it would be the first thing any tourist spots when flying into Dublin.”

## 3.2.11 Need for the Project

In general, many stakeholders agreed that a drainage solution is needed for the GDA; however, they did not agree with the proposed project solution for the reasons outlined in the following sections.

### 3.2.11.1 Population Forecasts

Many stakeholders queried the need for the project based on the current economic climate and the extent of emigration. Stakeholders felt that the data used to develop the project is “outdated...and questionable” and that these should “at least be critically re-examined” They queried the costs related to the project and questioned “the commercial viability of this plant...in the current economic climate.” Stakeholders stated “the initial study was done during the Celtic Tiger years...it does not make sense now” and, as a result, the “cost of the project is not sustainable” and is “incredibly wasteful.” Other stakeholders suggested that, as result of the economic climate, “the drainage needs during that timeline would be adequately and properly met through the upgrading of existing local facilities using the latest available technology.”

It is perceived by almost all stakeholders that “the projection assumptions are “completely at variance with the current population and economic activity and future target growth.” It was stated by one stakeholder group that there is capacity in the combined, existing plants and that it would be sufficient for at least ten years.

### **3.2.11.2 Multiple Smaller Plants versus One Large Plant**

It was felt that “a plant of this capacity is completely unnecessary.” The polluter pays principle was often invoked, with many feeling that the regional WwTP “should instead be replaced by smaller, local plants.” It was suggested that these smaller plants should be built “where development takes place” and “as close as possible to the source of its production.” Other stakeholders reiterated this, advising that smaller plants would be “far more economically and environmentally sustainable” and would “allow for incremental development...[and] the phasing of costs.” Some even felt that it should not just be up to the local towns and communities to manage their own waste, but that “each local authority in the GDA” should “manage their respective catchment areas.”

As part of this, stakeholders also commented on the proximity of the project to load centres and felt that “Fingal is only a secondary source of sewage to this scheme and should not have to take the effluent of other areas.” In Rush, stakeholders noted they are the “only large town on the Fingal coastline without...proper sewage infrastructure.” For that reason, it was felt that they “should not have to accept the sewage of the city of Dublin and that of five local authorities.”

It was felt that “the sustainability of concentrating wastewater treatment in single, large plant has not been demonstrated” and that “maximising efficient performance of existing plant locations should be the first consideration.” In addition, they commented that the prime strategic objective for GDA should be to minimise the level of foul wastewater treatment required by “diverting surface drainage from wastewater drainage” and “harvesting of grey water at local level to reduce treated water consumption and wastewater demand for domestic, commercial, and industrial sectors.”

Stakeholders felt that the use of smaller plants had a “huge benefit” and noted that “if there is a problem at the plant or there is a flood event, the scale of the disaster is far less if each plant is only large enough to treat the waste water from its own immediate environs” and that with “strategically interconnected smaller plants, backup and redundancy could be built in. This would provide increased reliability and sustainability compared to the current proposal.”

Stakeholders also suggested that smaller plants would allow for “for local water reuse, thus ensuring a supply of treated water for irrigation and other non-potable uses.” It was stated that “the abuse of water use for diluting human excreta and transporting them out of urban areas is increasingly questioned and being considered unsustainable.” In general it was felt that innovative technologies, as opposed to conventional methods, should be considered.

In relation to the *Strategic Environmental Assessment* (SEA) findings on the use of smaller plants, stakeholders felt that “if the water coming out of a wastewater plant is of good enough quality it will not put any rivers at risk.”

### **3.2.11.3 The Greater Dublin Strategic Drainage Study (GSDS) and the Strategic Environmental Assessment (SEA)**

There were several issues raised in relation to the 2005 *Greater Dublin Strategic Drainage Study* (GSDS) and the subsequent SEA of the GSDS that was carried out in 2008.

Most commonly, stakeholders made reference to the SEA because it recommended one single plant located in North County Dublin. Stakeholders wanted this to be revisited or reviewed, as they felt that there was “inadequate data underpinning the decision to opt for a large Sewage Treatment Plant” versus “multiple plants.” This is discussed in more detail in Section 3.2.11.2 (Multiple Smaller Plants versus One Large Plant).

A further comment in relation to the SEA was in reference to the population figures used to justify the need of the plant and the size of the plant. Many stakeholders felt that they were “calculated during the boom period when excess of 60-70 thousand new housing units were being built annually,” it was felt these needed to be revisited. This is examined in more detail in Section 3.2.11.1 (Population Forecasts). In addition, a stakeholder group commented that any predicted population growth based on available zoned lands is also no longer relevant.

Other stakeholders went on to comment that that the *Draft Environmental Report for the SEA* was “inconsistent, contradicting and selective in applications of ratings criteria used to assess each option;” another felt that “the subjective and inconsistent application of ratings applied to various options.” This stakeholder was making reference to the section of the SEA that stated that expanding Ringsend would be a “major negative” because of the impact on the SAC and SPA of Bull Island. They felt that it was contradictory to say this about one area and then undertake looking at the nine proposed land parcels and outfall locations with SPAs and SACs in this stage of the current project.

Additionally, it was stated the SEA was not based on any in-depth analysis and that it was biased as seven of the options proposed were to locate the plant in the Northern GDA. They went on to cite the load requirement for North East Fingal, stating that it requires “40,000 PE, less than 5%” of the overall PE proposed” and that they felt “it is clear that North East Fingal will be hosting a treatment plant for which it has no demand.”

The issue of flexibility, in reference to the SEA, was also raised, as it was felt that the assessment that a single larger treatment plant provides more flexibility is “an incorrect and flawed assessment.” They also went on to state that a single “monster” treatment plant is easier to deliver than smaller sized plants and they believe “it is the capacity that creates the issue.”

One stakeholder commented on the options studied within the SEA, stating that “option four was chosen because of economic drivers (although no economic analysis is available for inspection).” Another stakeholder commented that Option 2B - the twin plant option - should also be revisited.

The rejection of SEA Options 7A and 7B was cited as being flawed, as the assumption was made that “these plants would not be designed or built for tertiary treatment and odour abatement.” They commented that the “absence of examination of comparable sized WwTP in other European, urban environments is again a significant omission by the project.” Another stakeholder group stated that the SEA should have assessed the alternative of utilising a marine outfall pipe from Ringsend under option 1A and 1B. They also went on to state that “the failure of the SEA to consider possible alternative marine outfalls resulted in the premature rejection of possible options.”

The impact of the time line between the GDSDS, SEA, and the *ASA Phase 1 Report* was also cited as being “disjointed” and as “significantly” impacting the consultation process, as the GDSDS study identified one site for a WwTP, which was subsequently undone by the SEA that removed the location of the site in Portrane. It was felt that “communities impacted by the ASA were not part of the SEA process” and that this has led to an “anomaly for the public consultation process.” Another stakeholder group felt that the six options that originated within the GDSDS should be rendered invalid because they GDSDS erred by specifically naming Portrane. They felt that the SEA was biased as it considered an alternative for only one of the six options that contained a reference to Portrane.

Risk was another issue in relation to the SEA that was raised, with one stakeholder stating that “no risk assessment appeared to have been done on the “likely impact of the preferred strategic drainage option of a large regional WwTP with outfall pipe and associated orbital sewer.” A stakeholder group commented that potential risk from failure of large scale WwTPs is an “essential” criterion for consideration, stating that if risk had been included as a criteria in the original criteria for selecting a site (the GDSDS and subsequent SEA), that multiple smaller-scale treatment plants would have scored better.

#### **3.2.11.4 Proximity Principle**

Many stakeholders had an issue with the idea of the plant being sited far from the load centres that it is catering for. One stakeholder stated that they “fail to see how pumping effluent 20km up to the North of Fingal could be considered the optimum solution for the GDD needs.”

It was felt by some stakeholders “that as the primary (and majority) load centres are some 20-27km distant from Lusk and Rush sites, that these sites could not be deemed to be ‘favourably located’ to load centres as per the ASA Phase One Report.”

A vast number of stakeholders felt that the development of any of the proposed land parcels “by reason of their distant location from the primary and secondary load centres and the ensuing distances costs associated with the transportation of treated and untreated waste to any of the proposed sites, would conflict with the proximity principle and would therefore be contrary to proper planning and development of the area.”

A ruling by An Bord Pleanála (PL 006F.130274) in 2003 was cited by a number of stakeholders, as it was refused on the basis that “having regard to the proximity principle as set out in Waste Management Regulations, it is considered that the proposed development of any of these sites, by reason of their distant location from the primary and secondary load centres and to the ensuing distances and costs associated with the transportation of treated and untreated waste to any of the proposed sites would conflict with the proximity principle and would therefore be contrary to the proper planning and development of the area.”

Many felt “that every community should deal with its own waste” and that one plant and marine outflow will concentrate the waste of multiple areas in one region, overburdening the environment and people “downwind and upstream” of these facilities with a “disproportionate and unfair level of disruption, pollution, and risk.” This is dealt with in further detail in Section 3.2.18 (Risk Assessment).

### 3.2.11.5 Required Footprint

The 20 hectare (Ha) footprint required for the proposed site of the WwTP was also commented on, with some stakeholders commenting that “the area of 20Ha seems much larger than necessary for a PE of 700k.” Mutton Island Plant in Galway was cited as a plant that has an area of 2.25Ha and treats 170,000 PE, and the Little Island Plant in Cork was cited as having an area of 6.1 Ha, treating 413,000 PE, and finally Ringsend, which occupies 18Ha and treating 2.1 million PE.

### 3.2.11.6 Elevation

The elevation of the four proposed land parcels near to Lusk was also raised as an issue. It was stated that these land parcels lie between the “18m and the 31m contour while the seabed depth at the discharge point, via the Northern Outflow Study area, taking into account the protection of the shell fish beds that extend out to the eastern point of Lambay Island, is approximately 22m at LAT.” It was commented that this would allow for “a static head of between -2m and +9m which will be insufficient to facilitate the gravity flow of effluent from these sites.” Thus, if a land parcel local to Lusk is selected then it will be necessary to pump the discharge.

It was commented that within the Southern Outflow Study Area the maximum depth is 22m and if “a site at a higher altitude than any of the four proposed Lusk land parcels selected, then gravity flow for discharge of the effluent, through either marine outflow would be possible with no pumping required and knock on reduction in energy costs and carbon footprints.”

### 3.2.11.7 Policy Context

Many stakeholders disagreed that the need for the project was established in policy. One stakeholder stated that the project would not follow European trends towards Sustainable Development Strategy.

### 3.2.11.8 Cost

Stakeholders felt that there was uncertainty as to the final cost of the proposal, stating “estimates range from €500 million to €2.6 billion.” As a result it was advised that the “project development be suspended until a clearer projection of the expected costs is available” and that this should “cover the design, construction, and ongoing operation of the proposed plant.”

A number of stakeholders felt that the use of a network of smaller plants would “prove to be more cost effective than a single regional project” and that when considering the costs of this project should include “water,” “electrical,” “maintenance and operational,” and “land costs. A number of stakeholders also stated that the “additional energy required to transfer the waste water and effluent...will contravene two of the critical factors of energy conservation and minimisation of carbon emissions.”

The current economic circumstances were also stated as an issue, with stakeholders commenting that it seemed a “waste of very restricted capital expenditure to be progressing with a project that in reality is not even required by 2031 as advised by the SEA, or 2040 as estimated by the Alternative Site Assessment (ASA).” It was felt by many stakeholders that a cost benefit analysis is now a mandatory requirement in view of the current economic requirement and that it should analyse primary costs associated with the project and other costs, such as power and road infrastructure.

The absence of specific land parcel data was also an issue for stakeholders, as it was felt that “no assessment can effectively be carried out under any criteria” without having “more meaningful and specific data for comparison on purposes.” A stakeholder group went on to state that as a result of this non land parcel-specific data, “criteria such as air, climatic, factors, cultural heritage and landscapes are rated using a proxy indicator showing that fewer plants (1-10) is better than more plants (15-20+)” and they felt that this “proxy indicator is unreliable and incorrect.”

Additionally, some stakeholders noted that the SEA did not assess the full implications of the construction and operation of the project on biodiversity, flora, and fauna. It was also felt that it was premature to eliminate drainage options on economic and climatic factors without having a more detailed assessment carried out.

### **3.2.11.9 Energy**

One stakeholder raised concerns about security of supply of energy in the Lusk area, noting that in the region there are “no close connections with the distribution grid.” This was reiterated, with stakeholders stating that “there is no security of electrical supply in the Lusk/Rush area, unlike other areas in Fingal...there are regular power outages in the general Lusk/Rush area.” It was felt that this makes developing the WwTP in there is a “high risk strategy.”

Future energy cost unpredictability, posed by fossil fuel prices, climate projections for the future, and more variable rainfall patterns were also cited as concern. This issue “requires a new approach to water provision, maximising conservation and reducing the levels of treated water use with grey water harvesting.” They felt that this would mean that “the level of wastewater released into foul drainage systems should also be reduced with consequent cost and energy saving.”

Other stakeholders queried how much energy the proposed WwTP will require to run, with some stakeholders requesting that it is powered by renewable energy. Other stakeholders noted limitations on certain forms of renewable energy sources, such as wind turbines, as the Fingal County Council’s Energy Policy “states that wind turbines cannot be located within 10km of the coast.”

The lack of an Energy Action Plan was also cited as an issue, as it was felt these were required by the *Fingal Development Plan 2011-2017* and that “it would not be possible for Fingal County Council to future proof sustainable practices without this plan, so any other plan decreeing pumping sewage from Clondalkin to Lusk cannot honestly be deemed sustainable.”

Energy is also covered in relation to Climate Change (Section 3.2.2).

### **3.2.12 Odour**

Many stakeholders raised the issue of odour as a serious concern with some stakeholders stating it was their “biggest concern” and that “even with the best available technology, the total elimination of noxious odours is virtually impossible.” In addition to this, stakeholders were concerned that the sheer size of the plant would mean it “will give rise to odour nuisance” during “normal operation.” Some stakeholders further emphasised this by referring to the *Fingal Development Plan 2011-2017*, which stated that “it is not possible to prevent all detectable odours from escaping beyond the WwTP boundary. Odours have been know to travel long distances”

One stakeholder commented on the two different types of odour that are associated with WwTP, including “biogenic odour which is produced by the decomposition of organic matter in an absence of oxygen and typified by hydrogen sulphide, amines, ammonia, thiols and volatile fatty acids...non-biogenic odours which arise directly from the discharge of odours in trade wastes.” This stakeholder felt that the first type of odour would be a “significant source of odour especially during fine, sunny days with low wind speeds.”

Stakeholders felt the “stench” from the plant would be an “inevitable...problem,” which is “extremely distasteful.” It was suggested that the “prevailing winds” are taken into consideration when siting the plant, as they blow towards the population centres. Most stakeholders made reference to the prevailing south-westerly winds in the area and they felt that odour would travel in the direction of homes, villages, and towns. One stakeholder commented that “any noxious emission from the treatment plant, irrespective of location, will be carried by wind and precipitated in rain onto towns along the coast of North Fingal.”

Potential odours from the sludge operations were also commented on, with one stakeholder stating that it will be “responsible for the highest releases of odour.” They felt this could, under adverse weather conditions, result in odour being detected around “1-2km from the site, which means that people living nearby wont be able to open windows in their own houses, children won’t enjoy playing outside the house.”

Stakeholders also referred to their negative experience with existing WwTPs with “residents of Swords having to put up with foul odours, which reduce both the quality of life of residents of the surrounding areas and causing significant reductions in the value of homes and premises in the surrounding area,” while other stakeholders felt it was important to address “the odours coming from the plant in Barnageera.”

Some stakeholders had bad experiences with existing WwTPs, and made reference to Swords WwTP, which they commented had “generated odours when sludge was spilled during changing skips” and when the “odour control system failed during a power out.” One stakeholder advised, “I grew up near a sewage plant (in Twickenham, Middlesex, London) and know how awful the smell can be especially in winds and warmer weather.”

Stakeholders noted that depending on the type of treatment system in place, the loading to the WwTP, the topography of the land parcel and the meteorological conditions, notably temperature and wind direction, that “under adverse weather conditions odour will be detected around 1-2 km from the site.” It was suggested that any location should avoid “any degree of proximity to urban areas” and “the four Lusk sites are proximate to density populated areas.”

A number of local schools raised concerns about the odour impact the plant would have. One National School stated they are less than one kilometre, (however, some stakeholders advising it is just 500 metres away), one of the land parcels and were concerned that they “will be subject to foul smells on an almost daily basis” and that it will “make outdoor and indoor learning activities extremely unpleasant.” Stakeholders were concerned that their “children will potentially be living in a polluted environment the impact on their health and wellbeing is of great concern.”

Odour was a concern for some businesses, such as a childminder near Newtowncorduff who advised “it will...affect my income as the smells or even the perception of pollution will render my home unsuitable to mind young children.” Another businessperson advised, “I have the right to work in an environment that is free from toxic smells.”

One stakeholder also commented that the “likelihood of bad of bad odours from the sewage treatment plant will threaten the enjoyment of users of a number of golf courses in the area which provide significant employment for the community.” Another stakeholder listed a number of locations that would be affected if there was an odour issue in the plant, including the proposed new Lusk United Club House, the proposed new secondary school to the north east of Lusk, and the Round Towers GAA club house and playing pitches.

Near the Saucerstown land parcel, stakeholders were concerned about odour impacts on the Swords Open Golf Course, stating “we wouldn’t expect our golfers...to endure bad smells while playing a game of golf.” The Roganstown Golf Club also had similar concerns due to its “close proximity to the proposed site.”

In addition to the schools, tourist facilities, as mentioned in Section 3.2.3 (Community Impact), were also noted as potentially being negatively impacted by odour. Some stakeholders asked, “how can one enjoy any form...of activities...when the place smells like sewage?” Stakeholders noted, “it’s not much fun living with that odour, not being able to open your windows (for fresh air), not being able to sit outside to enjoy your lunch, not being able to garden, not being able to let your children outside to play. Extreme, you may say, but unfortunately true with sewage odours.”

The management of odours was also raised as an issue, with one stakeholder advising “plants have odour problems when not operating correctly or at capacity.” It was asked how these problems will be managed when the plant is in operation.

Stakeholders also raised concerns about odours arising from removal sludge, with one stakeholder stating “the smell from these tankers is just unreal. I walk early in the morning, and meet these tankers on a regular basis, you can smell them coming towards you and as they pass, and the smell lingers for quite some time.”

Odour modelling was requested by a large number of stakeholders, who felt that, even a crude model, should have taken place earlier in the process, when selecting land parcels, as it would have helped to determine the buffer zones or check if they were robust enough in light of the impact of prevailing winds and topography. It was felt that it was “odd that this basic piece of work was not done to inform the site selection process.” Concerns about air release values on the pipeline, and the location of these and whether any gas emissions monitoring would be in place were also raised.

### 3.2.13 Overburdening

Overburdening was a significant concern raised by stakeholders, as many had negative experiences with other projects in the area, including the Balleally Landfill, Dunsink Landfill, the EirGrid East-West Interconnector in Rush, the Trinity House Detention Centre, the Oberstown Detention School, the Bord Gáis Gas Interconnector in Loughshinny, the inert landfill at Hollywood and the planned “toxic waste ash dump...for the Naul/Ballyboughal.” Many stakeholders felt that the area has “carried the burden...on behalf of the people of Dublin” and they had been given “commitments...in the past that we would not be asked to shoulder a burden like this again.” It was felt that they have “had more than our fair share already” and that this development was “unjust and simply ludicrous.” In general, it was felt that “Fingal is not a dumping ground for the GDA.”

The people of Lusk were very concerned about the prospect of another development in their community, with one stakeholder noting “that Lusk has already done all that can be reasonably expected from a civic-minded community.” It was felt that many projects in the area had been “underhandedly approved” by a “council that has sold us out” and Lusk does not want to face that again. One stakeholder stated, “I only have to look out my kitchen window to see the result of bad planning,” while another feared the WwTP will be a “further blight” on the area. It was commented on by one stakeholder that there was an overburdening of infrastructural projects in the area but a lack of services.

Stakeholders in Rush felt similarly, asking “when is the tearing up and dumping on our town going to stop?” In addition to the projects listed above, stakeholders in Rush noted that the building of the new Tesco store is also disrupting the town. One stakeholder asked, “do you think the people of Rush and Lusk will stand idly by while we are being bullied like this?”

Many stakeholders commented on how negatively they felt they had been treated by those running other infrastructural projects in the area, particularly EirGrid on the East-West Interconnector in Rush. Stakeholders from the Rush area cited issues regarding access to roads, beaches, their homes, lack of respect, and lack of information from the project in general as amongst some of the problems experienced in the area and their fear is that they will experience similar issue with Greater Dublin Drainage.

Specifically for the Annsbrook land parcel, it was noted that there is already a natural gas pipeline cross the land and that the EirGrid East-West Interconnector follows the R129 from R132 Blake's Cross to Ballyboughal and on to Oldtown. Concerns were noted that placing the WwTP on this land parcel could "inhibit access to these pipes and increase the cost of construction of the plant." In Newtowncorduff, it was noted there are already ESB pylons on the land.

In the early stages of the consultation, stakeholders raised concerns about the proposed prison at Thornton Hall and the proposed landfill at Nevitt as contributing to the issue of overburdening as well. However, since the commencement of the ASA Phase 1 Consultation, both of these projects have been indefinitely postponed.

Some stakeholders queried the postponement of the Metro North project, asking how funding can be found for the proposed WwTP but not for Metro North, which "would have benefitted Fingal in general." Stakeholders noted that there was a lack of positive development in the area, which Metro North would have provided, stating "North Fingal has no university, no hospital, no army barracks" and are therefore "determined that it will have no super waste water treatment plant either."

One stakeholder even stated, "I don't know how much more I or my fellow residents can take. Time and again we have seen projects dumped on us which are transforming our area into a place that no one in their right mind would want to live." It was felt by another stakeholder that "the unequal targeting...for repetitive undesirable municipal amenities is an infringement of the constitutional right of the citizens."

Stakeholders queried the use of the site in the future, too, asking "do you one day plan to build an incinerator on the site?" Some stakeholders suggested the idea of "polluters pays," advising "it is clear...that every community should deal with its own waste." This is dealt with in further detail under Section 3.8.11.4 (Proximity Principle).

### 3.2.14 Planning and Zoning

#### 3.2.14.1 General Issues

Other stakeholders felt that, in general, the proposal “materially contravenes” the *Fingal Development Plan 2011-2017*. It was felt that the project “would be in direct contradiction to the objectives and aims” of the *Fingal Development Plan 2011-2017* and would “be contrary to proper planning and development in the area” due to the “industrial nature” of the project. One stakeholder felt it was “staggering that none of the GDD maps refer to the Fingal County Development Plan.”

Additionally, it was commented that the *Fingal Development Plan 2011-2017* includes a zoning category and, for this project, it is believed that it should be zoned in an area of Heavy Industry (HI zone), as is the case for other WwTPs around the country, in Cork, Limerick, and Belfast, which are all “sited in industrial areas (Little Island, Bunalicky, and Herman Channel area).”

Stakeholders cited the rural element of *Fingal Development Plan 2011-2017* and it was felt that this project would “materially contravene the Fingal Development Plan 2011-2017, as it would have detrimental and extremely negative effects on agricultural use or all land in its vicinity, the landscape and biodiversity.” One stakeholder pointed specifically to Objectives G111 and G136 in the *Fingal Development Plan 2011-2017*, which aim to support green infrastructure development in the region, stating that the project is “massively at odds” with these objectives.

The *Regional Planning Guidelines (RPGs)* were also cited as being contravened, as “building a sewage treatment plant and a sewer through the rural countryside is not protecting nor supporting the rural villages or countryside.” In addition, stakeholders felt that Fingal County Council has been very restrictive about building in local areas and that it would be inequitable to allow the construction of a WwTP in designated rural areas. One stakeholder advised that local residents have “been refused planning permission for small industrial developments...which would have created some jobs locally...the basis for refusal was that the area was zoned agricultural.” The same stakeholder advised, “you cannot ask residents to live by one rule and then breach that rule as a County Council.” Some stakeholders also noted concerns for their own existing planning permissions, feeling that they could lose their permissions if the project goes ahead.

The *National Spatial Strategy for Ireland 2002-2020* was also mentioned by stakeholders as it states “rural areas with particular cultural identities, associated for instance with language as in the case of the Gaeltacht, or the islands, and other areas of significant cultural heritage, can act as magnets for people and for certain types and levels of investment...conservation of identity needs to be considered in ways that allow development to take place.” Stakeholders felt that the area within a 10km radius of the Round Towers in Lusk has “unique horticultural rural areas with particular cultural identities, particularly the market gardening which provides a significant amount of Ireland’s fruit and vegetables.”

The *Regional Planning Guidelines (RPGs)* for the GDA were also cited, as stakeholders felt that their statement that “policies and objectives in Development Plans should seek to avoid increasing the extend of existing concentrations of socially disadvantage areas and to increase significant new areas of disadvantage,” was being contravened due to the fact that they felt this area of North Fingal has had to deal with several large waste infrastructural projects and is overburdened with them. Overburdening is covered in detail in Section 3.2.13 (Overburdening).

It was felt by some stakeholders that “building a sewage treatment plant and a sewer through the rural countryside is not protecting or supporting the rural villages or countryside; it is not appropriate sustainable development” and that his contravened strategic policy RP1 of the RPG.

An Bord Pleanála (Case 130274) was also cited by stakeholders. This case determined that a site close to a light industrial area at Courtlough, but zoned “to protect and provide for the development of agriculture and rural amenities” was therefore deemed to be “contrary to the proper planning and development of the area.” Stakeholders felt that “the proposed sites now in question are not even near to any non-agricultural lands and even more so it would be contrary to proper planning to build a sewage treatment plant with non-functional linkages to its hinterland in the rural Lusk area.” Stakeholders also went on to state that the same decision mentioned the “out of character basis of the proposed development and its visually obtrusive nature. It was felt that this would also be the case for the proposed WwTP at any of the four land parcels in Lusk.

Many stakeholders also cited a ruling by An Bord Pleanála (PL 006F.130274) in 2003 which refused a planning application on the basis that “having regard to the proximity principle as set out in Waste Management Regulations, it is considered that the proposed development of any of these sites, by reason of their distant location from the primary and secondary load centres and to the ensuing distances and costs associated with the transportation of treated and untreated waste to any of the proposed sites would conflict with the proximity principle and would therefore be contrary to the proper planning and development of the area.”

In addition, several stakeholders cited what they felt was a precedent set by Fingal County Council, as it had decided “not to locate a football academy near Rogerstown Estuary because of the potential risks to this protected site. The County Manager applied the precautionary principle of the Habitats Directive.”

There was a feeling by some stakeholders that it was unfair that they had to pay the price of bad planning that they felt had been undertaken by Fingal County Council, one stakeholders stated that many planning permissions for housing should not have been granted “knowing the sewage infrastructure was not there to cope.”

### **3.2.14.2 Land Parcel Specific Issues**

#### **Annsbrook, Newtowncorduff, Rathartan, and Tyrellstown Little**

Regarding the four land parcels near Lusk (Annsbrook, Newtowncorduff, Rathartan, and Tyrellstown Little, stakeholders noted that these lands are also deemed to be rural lands in the *Fingal Development Plan 2011-2017*. It was felt that the proposed WwTP most closely equates with “Industry General and Industry High-Impact” zoning, which are “clearly not permitted” in a rural zone. It was felt that using these four land parcels for a WwTP “offend the Development Plan at a fundamental base level.”

#### **Cloghran**

The Cloghran land parcel was noted by some stakeholders as having some of the “most strategically located lands in the country” and there has been lobbying to change its zoning to allow for “mixed use employment based development based on the ‘airport city’ concept that is becoming popular across Europe.” One stakeholder noted it would be “heinously wrong” to select this land parcel that has been designated as part of the “critical airport economic zone.” It was felt that if the WwTP is developed on this land parcel, it would “compromise the longer term development potential” of the lands. A number of communities were noted as being potentially impacted if Cloghran is chosen, including Burnell, Newtown Court, potential developments at Belcamp College, and other communities as well.

## Clonshaugh

Specific concerns about the impact on Clonshaugh were noted, as a proposal to develop Industrial Development Authority (IDA) lands as a “high tech, IT, and avionics industrial and business estate” would be “wrecked” if the WwTP is developed nearby. Additionally, it was advised that the “historic Traveller communities” near Priorswood and Darndale “have faced major challenges over the past decades...it would be incredibly unfair to them to impose” the WwTP in their vicinity.

It was felt that choosing Cloghran or Clonshaugh would “be hopelessly premature” as Local Area Plans are currently being developed and “any decision on the location of a sewage plant in the wider North Fringe district would gravely pre-empt the important” Local Area Plan.

## Saucerstown

Some stakeholders raised concerns about the impact of the project on “lands zoned ‘to preserve and provide open space and recreational amenities.’” This was in reference to the Saucerstown land parcel and it was felt that developing it for the WwTP would result in the loss of a “much needed resources for sports and recreation,” including the proposed “Swords Regional Park, the best park Swords will ever see,” as the lands chosen sit on the same proposed land parcel.

Two local golf courses, Roganstown Golf Club and Swords Open Golf Club, were specifically noted in this area as previously having been designated as part of the Green Belt Area (1999) Integrated Tourism/Recreational Complex plans. It was felt that the buffer zones for the proposed WwTP are too close to the golf courses and contravene the objectives of this zoning.

### 3.2.14.3 Airport and Flight Paths

#### General Issues

As mentioned in the previous section, many stakeholders were concerned about potential development at the airport for a new airport city. These “incredibly valuable” lands would be wasted on the proposed plant.

It was noted that the “new runway at Dublin Airport has also already received planning permission...and this reinforces the unsuitability” of the proposal.

Some raised concerns about the constraints utilised in selecting the land parcels, noting the “inclusion of *proposed* flight path zones at Pickardstown and Kingstown and consequent removal of potential sites.”

Other stakeholders, though, felt that the airport would be a suitable location, as areas near the airport would have the “least negative impact” on rural communities, and would mean less prime agricultural land would be impacted.

### **Land Parcel Specific Issues**

#### **Baldurgan, Cookstown, and Saucerstown**

It was also noted that Saucerstown, Cookstown, and Baldurgan could become problematic for the airport if they became “significantly attractive to birds” as well.

#### **Cloghran and Clonshaugh**

There were concerns about the safety of locating the WwTP near the airport’s flight paths in Cloghran or Clonshaugh. There was a “serious concern arising from the threat to aviation safety posed by bird hazard” as both land parcels are “within an area where the presence of any attractants for scavenging birds would be a hazard to air safety.” It was felt that the project would attract a number of birds, including gulls, starlings, and even herons, that are known to “constitute a major potential hazard to air safety.” It was noted that the United States Federal Aviation Authority “strongly recommends against the construction of new wastewater treatment facilities within...3.05km...of an aerodrome...or 8km...if the facility could cause bird movement.” It was advised that both Cloghran and Clonshaugh are “well within these areas of concern.” It was also noted that the “bird sanctuaries at the Malahide Estuary and Portmarnock may further exacerbate this problem.”

It was also noted, for these land parcels, that there would need to be limits on the heights of structures with nothing over 91.6m for Clonshaugh and 83.3m for Cloghran.

### 3.2.15 Property and Land Value

Concerns were raised about the already-decreasing property values in the area, with stakeholders stating that “the effect of having such an enormous plant on our doorstep would, quite simply, keep property values low,” with some stakeholders feeling that “even the perception of pollution will affect the value of land property.” It was advised that many people purchased their properties at the height of the boom and “any further devaluation is not sustainable.” It was felt that the development of the WwTP would be “yet another nail in the coffin for North County Dublin,” contributing to low property prices.

### 3.2.16 Proximity to Sensitive Receptors

#### 3.2.16.1 General Issues

The 300m buffer zone was often called into question, with some stakeholders querying the accuracy of the distances by stating “the distance of 300 metres...has not been adhered to in several places...especially in Rathartan and Tyrrelstown.”

Many stakeholders felt that 300m buffer zone was “unacceptable” and not far enough as well. One stakeholder stated that the buffer zone did not comply with international best practice “which allows for 400m buffer, rising up to 2000m for locations such as schools, hospitals, nursing homes, and areas with an urban area exceeding 2000 residents.”

Some stakeholders commented that the proposed land parcels were located far closer to populated areas than demonstrated in the *ASA Phase 1 Report*, citing the example of Rathartan being within one kilometre of Hayestown, which has a significant population.

Other stakeholders were concerned about the proximity of their houses to the WwTP, stating the “smell and noise will be unbearable.” Other stakeholders commented that there would be increased light pollution from the proposed development.

#### 3.2.16.2 Noise

Some stakeholders noted that they already suffered noise pollution from the nearby motorway and airport and were concerned that the proposed WwTP, both in terms of the plant itself and the traffic, would increase this nuisance. Stakeholders also commented that the “constant noise...will bring havoc to our daily lives.” Concerns were noted that due to the open landscape of the proposed WwTP “noise can very easily be carried by the wind to residential developments.”

It was felt by one stakeholder group that there was no information regarding noise on the project, and that it was important to realise that noise can travel a great distance, as many had experienced noise from the M1 in Lusk village.

A local National School also noted concerns about their proximity and the impact of construction noise, stating “the ongoing noise of the initial construction and the subsequent daily operations and plant traffic will also disrupt our learning activities and create a difficult learning and working environment.”

Operational noise was cited as being a potential issues, “particularly tonal characteristic associated with certain plant which operates continuously, or intermittently throughout the night time...can lead to problems during the quieter night- time periods for any dwellings which otherwise experience very low background noise levels” and “noise can be very easily carried by the wind to residential developments because of the propose locations of the WwTP (i.e. proposed locations are close to them located in open agricultural lands).”

### **3.2.16.3 Light Pollution**

One stakeholder commented on the potential impact of light pollution from the WwTP. This stakeholder felt that as this proposed development would occur in agricultural land, it would require external lighting, which would impact on nearby properties or the surrounding countryside. It was also commented that this could have a “negative impact upon biodiversity by affecting the normal diurnal patters of plants and animals” as well as the potential for “light spillage” above the horizon.

The impact of light pollution on the possibility of astronomical observations being made in the vicinity of the land parcel was also cited as an issue, as was the impact of a lit site on the protected views as set out in the *Fingal Development Plan 2011-2017*, “particularly in the twilight times of the morning and evening and also at night under a full or close to full moon.”

### **3.2.16.4 Odour**

Odour was an issue in term of the proximity of the plant to sensitive receptors, but also as an overall issue that was commented on by most stakeholders. It is also covered in Section 3.2.12 (Odour).

Stakeholders were also concerned about the odour impact on local school as they could ‘be subject to foul smells on an almost daily basis...this will make outdoor and indoor learning activities extremely unpleasant.” Stakeholders were concerned that their “children will potentially be living in a polluted environment the impact on their health and wellbeing is of great concern.”

Odour was a concern for some businesses, such as a childminder, near Newtowncorduff, with one stakeholder advising “it will...affect my income as the smells or even the perception of pollution will render my home unsuitable to mind young children.” Another businessperson advised, “I have the right to work in an environment that is free from toxic smells.”

One stakeholder also commented that the “likelihood of bad of bad odours from the sewage treatment plant will threaten the enjoyment of users of a number of golf courses in the area which provide significant employment for the community.” Another stakeholder listed a number of locations that would be affected if there was an odour issue in the plant, including the proposed new Lusk United Club House, the proposed new secondary school to the north east of Lusk, and the Round Towers GAA club house and playing pitches.

Near the Saucerstown land parcel, stakeholders were concerned about odour impacts on the Swords Open Golf Course, stating “we wouldn’t expect our golfers...to endure bad smells while playing a game of golf.” The Roganstown Golf Club also had similar concerns due to its “close proximity to the proposed site.”

In addition to the schools, tourist facilities, as mentioned in Section 3.2.3 (Community Impact), were also noted as potentially being negatively impacted by odour. Some stakeholders asked, “how can one enjoy any form...of activities...when the place smells like sewage?” Stakeholders noted, “it’s not much fun living with that odour, not being able to open your windows (for fresh air), not being able to sit outside to enjoy your lunch, not being able to garden, not being able to let your children outside to play. Extreme, you may say, but unfortunately true with sewage odours.”

### **3.2.16.5 Land Parcel Specific Issues**

#### **Annsbrook and Newtowncorduff**

The buffer zone was of particular concern in relation to the proximity of the WwTP to homes and schools. Concerns were raised about the proximity to the local National School at Newtowncorduff and Annsbrook, stating that they are concerned that the development of the WwTP will impact how they can deliver their learning “programmes in an effective and safe way.” They stated, “we do not accept that (1km) is a reasonable distance between a treatment plant and a school.” Other National schools near these land parcels also objected to the WwTP being just one kilometre away. Stakeholders near Newtowncorduff were also concerned that the Dun Emer estate is just 700m away from the land parcel.

## **Cloghran**

Cloghran also has a number of athletic sites in close proximity to the land parcel, include the headquarters of the Athletic Union League.

## **Clonshagh**

At Clonshagh, stakeholders noted the proximity of the Croabh Ciaran GAA Club, stating “it would be unthinkable to have these children and young people training and playing matches in the shadow of a massive sewage plant.”

## **Rathartan**

Stakeholders near Rathartan also raised concerns for the proposal’s proximity to the “highly populated areas” of St. Catherine’s, Hayestown, and St. Maur’s Estates.

## **Saucerstown**

Near the Saucerstown land parcel, concerns were raised about the proposed development’s proximity to the Applewood Primary School, with stakeholders stating “why anyone would elect to build a sewage treatment facility of this scale adjacent to where young children spend their daily lives is beyond comprehension.”

### **3.2.17 Public Consultation**

Many stakeholders commented that there was a “lack of meaningful public participation” as they were “unaware of the proposal until the end of October 2011, when letters began to arrive in landowners’ doors;” another stakeholders stated that it is “disingenuous to suggest that there has been widespread public consultation” as it had only come to their attention “in the last ten days” (at the launch of the ASA Consultation) and was, therefore, “ineffective.”

Stakeholders stated that they were unaware of the project prior to this consultation phase and felt that it should have been “publicised earlier.” Some stakeholders asked for an extension to the consultation period as they felt there was a “lack of time” to adequately make submissions, with several asking for an extension period of several months in addition to the two weeks extension that was given. Some stakeholders were concerned that even with the extension period their feedback would not have “the same status as those received” prior to the extension.

It was also commented that the public consultation process for this project has been “significantly impacted by the disjointed progression between SEA and the ASA” as the preference of the SEA was for the upgrade and development of the GSDSDS, including a regional treatment plant, at a specific and named site in Portrane and that “the decision to progress to an ASA process, without re-considering the remaining valid options of the SEA and wider impact of EU directives created an anomaly for the public consultation process, as communities impacted by the ASA were not part of the SEA process.” This was cited as being an “anomaly” that needed adjudication and that as a result the consultation process needed to be extended to afford all communities impacted by the ASA a “fair opportunity to assess the project proposal.”

This was further illustrated by a comment that stated that although there had been previous consultation phases these were “misleading and lack transparency as practically all of those submissions prior to this consultation period were made by those opposing a large site specific sewage treatment plant in Portrane.” Some stakeholders noted that the project has been “significantly impacted by the disjointed progression of the project between the SEA and the ASA” and it was felt that the original, valid SEA options should be reconsidered.

One comment received from a stakeholder was that the choice of language used has “successfully ensured that citizens have not understood public notices to date,” while other stakeholders commented that the project name was “misleading” and it should instead be branded as a “sewerage project.” Other stakeholders queried the format of the information provided, stating that “in order to provide true, meaningful inclusion” the project information should be provided in Braille and Irish Sign Language. Another stakeholder suggested that due to the copyright on the report they “may not legally be entitled to read” it. It was suggested that this was done deliberately, with one stakeholder commenting “it is obvious that the proposers of this highly controversial scheme want to draw as little attention to it as possible,” while another stated “you are just trying to fast track this project and keep it out of the public eye.” Other stakeholders felt that “Fingal County Council are not adhering to the Aarhus Convention.”

The ways in which people could make submissions was also raised as an issue, as it was suggested that a prepaid postal response form should have been provided. Other people suggested a “stakeholder reference” programme, where stakeholders could be asked if they knew other people who would be interested in receiving information on the project.

Another stakeholder commented that there was not a direct link from the Fingal County Council website to the project website or, if there was, they were unable to find it. Stakeholders also commented that the use of an 1890 number was not best practice, as those phoning from a mobile would pay more than those from a land line, and that there were concerns about the ability of people living outside of Ireland to ring the lo-call phone line. .

Some stakeholders queried how people had been made aware of the consultation process, as they felt that information had not been “passed on to any local inhabitants within the area.” It was suggested that An Post’s services or refuse collectors could have been used to raise awareness of the consultation to each household. Stakeholders requested a commitment from Fingal County Council to deliver “a hard copy notice” to each household or business in the future, while another stakeholder suggested that notices in the free newspapers would be most suitable, as “in a time of massive unemployment it is ridiculous to expect people to buy a paper to be kept informed by their council.”

A comment received by one stakeholder was that “people living in the area need to be allowed to voice their concerns.” It was felt that “the current public consultation process may be following the letter of the law...but it has failed to provide a meaningful dialogue with local communities.” Another stakeholder suggested that in order to ensure all interested stakeholders were aware of the project Fingal County Council “should do a meeting in each area in a local school or centre.”

One stakeholder felt that employing a “PR” firm naturally raises suspicions, while another stakeholder felt that the appointed Project Team will always “act in the client’s favour...and are against the public’s interest.” It was felt that in general, the process “inspires suspicion, not trust.”

### **3.2.18 Risk Assessment**

Many stakeholders raised concerns about health and safety and risk based on faults and the plant and the impact it could have on the sea, fisheries, and the environment. Some stakeholders noted concerns with the “threat of pollution resulting from an accident or systems failure or as an inevitable consequence of the deliberate release of sewage.” Other stakeholders noted concerns with a “terrorist attack” that could “lead to large volumes of untreated wastewater being discharged directly into the sea” or into local rivers and estuaries. Concerns for any malfunction’s impact on agriculture were also noted with contamination being a large concern. Stakeholders noted than an “outbreak of E. Coli” would be very damaging to their crops (more details on stakeholder feedback on the project’s potential impact on agriculture can be found in Section 3.2.10.1 (Agronomy/Agriculture and Horticulture)).

It was noted that malfunctions have occurred elsewhere, with examples of a systems failure in Edinburgh in 2007 and London in 2011 cited (see Section 3.2.20 Technologies and Treatment Levels for further details). Other accidents were noted as occurring in “Germany, India, and the USA,” as well as Canada.

Stakeholders felt that if there was an accident at the plant or even in the orbital sewer it would be “catastrophic” and “the damage to the area would be unquantifiable.” It was felt that “it is one thing dealing with the consequences of a system failure in a small plant, but something on this scale will have a detrimental effect for a very long time to come, both on our beaches, and the delicate balance of biodiversity living in these waters.”

The absence of a risk assessment of failure was felt by some stakeholders to be a negative aspect of the ASA Phase 1 process. Some commented that the awareness of risk posed by WwTPs and pumping stations is high in a coastal town, particularly a coastal town like Skerries, “which has recent experience of WwTP failure at Barnageera.”

Stakeholders also called for a full risk assessment in order to “properly weigh up each strategic drainage option” and it was felt if this had already been completed “a different preferred strategic drainage recommendation would have been arrived at.” Other stakeholders asked for information on the “contingency and emergency plans,” including any compensation for damage that will form part of the project’s development.

Stakeholders felt that the following risks need to be taken into consideration in determining the location of the plant:

- **Loss of capacity:** Many stakeholders felt that “breakdown of a single large sewage plant will leave an enormous void in the treatment capacity for the Greater Dublin region, whereas the potential for simultaneous failure of multiple smaller units is less.”
- **Human health:** “The potential impact of one large sewage plant on human health and wellbeing are far greater than the impacts of smaller units” needed assessment.
- **Impact on receiving waters:** It was felt that this risk had “been omitted from any strategy or analysis” and needed to be assessed.
- **Risks associated with pumping sewage in a 28km orbital sewer:** It was commented that “the risks associated in pumping untreated sewage along a 28km sewer pipe are far greater than a treated sewer.”

- **Risks to food security and agricultural production:** As noted in Section 3.2.10.1 (Agronomy/Agriculture and Horticulture) food security was an issue for most stakeholders, who felt that a risk assessment for this was required.
- **Economic Risk:** The need for this project needed to be reviewed in light of current economic trends and population forecasts.
- **Impact on the Environment:** Many stakeholders stated that “that any and all potential impacts arising from the construction, operation, and maintenance of a sewage plant, orbital sewer and outfall pipe” need to be adequately risk assessed.
- **Security of Energy Supply:** It was stated the present electrical infrastructure would not support a plant of this scale due to power outages in the Rush area.

In general, it was felt that the project is “a disaster waiting to happen,” and that the potential risk from failure of large scale WwTPs is an “essential” criterion for consideration. Many stakeholders believed that if risk had been included as a criteria in the original criteria for selecting a site (the GSDSDS and subsequent SEA), that multiple smaller-scale treatment plants would have scored better.

### 3.2.18.1 Experience with Other Wastewater Treatment Plants

#### Nationally

Stakeholders often referenced general problems with other WwTPs in Ireland, with Ringsend being cited as a comparable plant that often has problems. People often referenced Ringsend’s “inability to cope with the volume of waste” and raised concerns that this project would face similar problems. It was felt that Ringsend “is an obvious point of reference,” whereby it was a “state of the art facility” at the time, but has caused “nothing but problems since its establishment.” A stakeholder demonstrated these issues by citing the number of complaints related to Ringsend; “there were 120 complaints last year regarding the impact to water quality. People also made complaints in relation to odour.” Stakeholders felt that if this project goes ahead they are “certain the very same issues will affect us but on an even greater scale.”

Some submissions detailed their experiences with Fingal County Council's management of existing WwTPs, stating there has been an "inability to maintain the existing Swords wastewater treatment facility...there are persistent issues with odour problems" at this plant. One stakeholder even stated that "Fingal County Council had failed to maintain the existing Swords Wastewater Treatment Facility such that surrounding communities have been seriously impacted by odour problems which are also replicated by the continuing odour problems in Saucerstown from the sewage pipe connecting Roberstown to Swords covering 500m stretch eastward from the R125/R108 Junction."

People felt that "Fingal County Council needs to develop expertise in managing smaller plants successfully first and extend to larger plants over time." Issues at a sewage pipe connecting Robestown to Swords were noted as well.

Other stakeholders commented that there was a "distinct smell in the region of the treatment plant, at Kelly's Bat, Skerries Educate Together National School, and Skerries Point Shopping Centre."

Barnageera was noted as another problematic area, where a failure resulted in "a serious risk to health and closed the bathing and amenity waters."

Stakeholders did not express confidence in the management of this project and felt that there is "a lack of management on the part of Fingal County Council and an unwillingness to accept responsibility for and to resolve the negative impact on residents' quality of life."

In addition, many stakeholders commented on the existing situation in Rush, whereby Fingal County Council has received permission from the EPA to discharge raw sewage from the town of Rush, directly into the Irish Sea at Rush Harbour. It was felt that this was an unfair situation, considering that this may not be addressed by the construction of a new local WwTP in Donabate, and that it added further to their lack of confidence in Fingal County Council's management of water treatment.

### **Internationally**

Overall, many submissions received were fearful of how the plant would be operated, and referred to plants in other countries for examples of where things had gone wrong. Many submissions received cited several examples of where pollution had occurred.

The first example was a sewage spill that occurred in Leith in Scotland in 2007, where it was stated that over 120 million litres of sewage was discharged into the River Firth over a 60 hour period, resulting in an environmental disaster and the cessation of fishing in the area. It was cited that residents in Leith have been campaigning for years about the smell from the plant and which they feel is not fit for purpose.

The second example given was Mogden sewage treatment works in London, one of the largest in the United Kingdom. It was stated that the plant deliberately released sewage because of heavy rain, resulting in the death of thousands of fish. It was also stated that the plant refused to cover all eight storm tanks, which collect sewage when the works are overwhelmed, and that it has resulted in a major source of the odour and has become the biggest sticking point for the residents of Mogden. It was also noted that the plant has been blamed for increased mosquito population and exceedingly bad smells in the local area.

The Winnipeg WwTP (Canada) was cited as having released untreated waste on 7<sup>th</sup> October and 3<sup>rd</sup> November 2011, where more than one billion litres of the sewage flowed into the river due to break down of one of the treatment processes, and this incident was not reported until the several weeks later.

The Buffalo Bayou WwTP, Texas was also cited as having released more than 100,000 gallons of untreated waste into the Buffalo Bayou, after a sewer collection system in the city's east side failed, in December 2010.

### **3.2.19 Road Infrastructure and Traffic**

The local road infrastructure was an area of concern for many stakeholders. Many stakeholders felt that the roads are "totally inadequate" and "will not be able to accommodate the increased level of traffic." It was stated that "the impact of traffic movements...will add a significant volume of heavy goods vehicles on the roads...which are poorly maintained and already carrying excess volumes of traffic." In general, it was felt that the "proposed sites simply do not have the required infrastructure to tolerate the number of trucks required," both in relation to construction and any future sludge movements.

Some of the land parcels, including Annsbrook, Baldurgan, and Cookstown, were specifically identified as being “located in rural areas accessed by poor secondary roads” and therefore unsuitable for the development. Rathbeale Road, in relation to Saucerstown, Baldurgan, and Cookstown, was advised to be unsuitable, as it is “already busy” and increased traffic due to the development of the WwTP will “bring havoc into our daily lives.” The Tyrellstown Little and Rathartan land parcels were also cited as being predominantly surrounded by country lanes that allow only one vehicle through at time and that they would be totally unsuitable to accommodate any development.

In terms of the Rathartan land parcel, it was commented that the western end of the land parcel is bounded by the Dublin to Belfast rail line which owing to the topography in the vicinity runs in cutting and on embankment and it was felt that “access to the land parcel from this axis is not feasible.” A stakeholder also stated that “the side road off the Rush to Lusk R128 road at Effelstown is not suitable for upgrade so as to provide access either, owing to the number of and proximity to private dwellings and the nature of the road itself.”

The R128 between Effelstown and Whitestown was stated as undulating significantly and was felt to have “very considerable alignment constraints” and that “there is no location along this section of the R128 that would be suitable to provide a safe access point to the Rathartan land parcel” which would “not have very significant adverse impact on traffic flow and volumes between Rush and Lusk.”

It was felt that “the cost to upgrade these roads to accommodate both the construction traffic and ongoing plant traffic” would be too much and will result in the plant not being worthwhile in terms of “value for money.” Concerns were also noted in regard to upgrading the roads that they would further negatively impact on the valuable agricultural land, due to increased land-take from road expansion.

Some stakeholders commented on the potential traffic from staff transport, maintenance, and ancillary activities, which could have a long-term effect. One stakeholder estimated that this could result in “approximately 50 vehicles/day can be assumed to cover staff movements and ancillary activities.”

### **3.2.19.1 Road Safety**

Some stakeholders raised these concerns about the adequacy of the roads in relation to safety, as many are used for “jogging, walking, and cycling” and “an increased in the volume of traffic may lead to an increase in the amount of accidents.”

Road safety was another issue raised in relation to traffic and road infrastructure. It was felt that because of the poor and overburdened road infrastructure in the area, “most of the roads are third class roads, narrow without road markings or side of the road markings with speed limits of 80km/h.

An increase in the volume of traffic may lead to an increase in the amount of accidents.” This was further added as a concern in terms of amenity, due to the fact that many people use the local roads for “jogging walking and cycling.”

### 3.2.19.2 Sludge Management

Reference was made to Fingal County Council’s *Sludge Management Plan*, which plans to build a central sludge hub at either Kilshane or Dunsink, and that transferring sludge from the proposed WwTP in Lusk to Kilshane or Dunsink would not be sustainable and “would increase the traffic of HGVs to and from Lusk.”

Stakeholders were concerned about the site’s potential to become the sludge hub for the county and that this would “generate untold volumes of traffic and consequent traffic congestion, as well as additional odour, problems in the locality.” One stakeholder estimated that between staff-related, sludge movements, and operational traffic will result in “approximately 125 vehicles/day.”

The Fingal County Council report on *Water Services Assessment of Needs 2005-2012* was also quoted as stating that during the operation of the 700,000 PE WwTP, industry estimates for this size of plant would suggest that between eight and 16 sludge skips per day will leave the site. Stakeholders felt it would “represent a significant increase in heavy vehicles for the rural communities around each of the proposed sites local to Lusk.”

### 3.2.20 Technologies and Treatment Levels

A number of stakeholders put forward alternative treatment methods that could be used instead of a traditional WwTP, such as using the gas from the WwTP to provide gas to homes in the area. A number of stakeholders raised issues on existing treatments plants, with one stakeholder noting “Fingal County Council has a poor record of managing smaller treatment plants.” A stakeholder group also commented that they questioned the effort made by the Technical Team to derive solutions based on demand reduction, as they felt that the “inclination to select solutions which propose increases capacity is evident in the project’s published reports.”

Some stakeholders went on to comment that as we have “highest per capita water consumptions in the world” and suggested that “what is introduced in the freshwater system will have to be processed in the wastewater system...fixing our distribution losses and fixing our bad habits in water use will fix the waste water treatment dilemma.” It was advised that “it may be worthwhile to consider upgrading the treatment and reusing the water from this treatment plant to reduce the requirement to import water.”

One stakeholder group stated that they felt that the money set aside for this project would be better spent by addressing the “numerous operational deficiencies in the current system,” particularly as they felt the “demand justification for the proposal no longer exists.”

There were also concerns that the proposal for the GDD project did not “indicate the requirements for the supplementary pumping stations, access shafts, electrical sub stations...it does not show the required land acquisitions associated with these requirements”, and that there was a need for this information to be provided.

### 3.2.20.1 Alternatives

Stakeholders felt that the level of treatment proposed was not appropriate and that the Fingal County Council should look for international best practice in this area, noting that “citizens of Europe in their landlocked cities, provinces and countries do not have the facility to do with their waste as we do.” One stakeholder commented that the project needs “to take account of sustainable best practice technologies worldwide, and the need to recycle as much water as possible, rather than inefficiently dumping minimally treated sewage in the sea at considerable cost and wasting vast quantities of water.” Stakeholders noted that “the technology is available and working in other jurisdictions and that the purpose of these processes is sustainability and water conservation” and requested that the “authority investigated this proposal and determined what cost/benefits might accrue.”

An example of such technology was cited as occurring in the Dutch town of Epe, which recently adopted new technology<sup>3</sup> that was mentioned as being an “energy efficient tertiary treatment plant for €5million” And that “the €500m estimated for a regional plant is more than enough to build 15 state of the art plants, should they be required.”

A stakeholder group also had issue with the premise that the plant in Ringsend could not be extended any further, citing a plant in The Hague,<sup>4</sup> which serves a population of 1.4 million on a site of 5Ha, and carries out all its primary treatment in 16 enclosed and ventilated tanks with eight further tanks for biological treatment. Thus, they felt the required footprint of 20Ha, as stated by the Technical Team, is not needed and that Ringsend could be extended further using similar technology.

A plant in Melbourne<sup>5</sup> was also cited as demonstrating the potential economic benefits of tertiary treatment, as “tertiary treatment produces a final effluent characteristic that allows assimilation in the immediate receiving waters rather than needing an extended outfall.”

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<sup>3</sup> [www.iwapublishing.com/template.cfm?name=w21prodnews220610b](http://www.iwapublishing.com/template.cfm?name=w21prodnews220610b)

<sup>4</sup> [www.wastewater-treatment-hague,veoliaenvironment.com/features/geography.aspx](http://www.wastewater-treatment-hague,veoliaenvironment.com/features/geography.aspx)

<sup>5</sup> [www.melbournewater.com.au/content/current\\_projects](http://www.melbournewater.com.au/content/current_projects)

### 3.2.20.2 Treatment Levels

The majority of stakeholders who raised concerns about the proposed treatment levels felt that “tertiary treatment must be included” in proposed plant, with one stakeholder noting that although the secondary level treatment “may meet current EU regulations there is, surely, no guarantee that this will always be the case” and other stakeholders noting that the failure to include tertiary treatments was “reckless.” One stakeholder group stated that they had “expected that the necessity to meet the EU directive would drive FCC to apply proven systems for nutrient abatement, filtration and UV as standards for their WwTP.”

Other stakeholders suggested that the treatment levels should be considered “in conjunction with the clean water needs of Dublin into the future, rather than crude traditional dumping at sea” and that the re-use of water “for industrial or agricultural purposes” should be considered, particularly considering the importance of water as a commodity.

Another stakeholder noted that they were unable to find any consideration of advanced treatment options in the project studies and noted that the “primary concern of residents is that the quality of the treatment works will be unsatisfactory and will give rise to environmental problems, this proposal has the merit of addressing these complaints by ensuring the highest of standards” and that advanced treatment would “also greatly reduce the need for major capital projects such as the Shannon-Dublin transport of drinking water.”

### 3.2.20.3 Outfall

In general, some stakeholders commented that if the use of an outflow to the sea is unavoidable, then every effort should be made to ensure this is as far from the coast as possible.

### 3.2.20.4 Distributed Treatment

A number of stakeholders suggested that a distributed or modular treatment plants with an interlinked network be considered. Stakeholders felt that this option was “obvious solution” as “each area treats its own waste, so that no one area has to pay the price for all.” It was felt this would reduce “risk of catastrophic failure,” and would “allow extensions to be added in years to come if the need arises” to build redundancy into the network. It was also noted by stakeholders that it “would be more acceptable to the citizens, and, by providing suitable water for industries, would contribute to the conservation of water resources.”

### 3.2.20.5 Sludge Treatment and Use

Sludge was raised by stakeholders as an issue in terms of “what will happen” to it at the end of the treatment process. Some stakeholders noted the use of sludge from Ringsend in agriculture and asked if the sludge from the proposed WwTP will be used in a similar manner, with some stakeholders advising “the land spreading...in the surrounding area would not be supported.” Other stakeholders, however, felt there was “enormous potential” for sludge spreading on agricultural land.

Some stakeholders also queried whether or not sludge from industrial sites or abattoirs would be received into the WwTP for treatment. As noted in Section 3.2.19 (Road Infrastructure and Traffic), stakeholders were also concerned about potential increases in traffic levels if part of the WwTP involved the creation of a “sludge hub.”

## 3.2.21 Water Quality

Water quality, both fresh and salt water, was a serious concern for many people, particularly in terms of their fears for the possible pollution of these water bodies. Stakeholders often raised this in relation to risk, as they had concerns that an accident at the WwTP would result in an accidental discharge of sewage into water bodies. Stakeholders raised concerns relating to the “potential impact of discharges from the outflow pipe” that were in “conflict” with the *Water Framework Directive* to maintain and improve water quality. The “recent improvements in water quality in Skerries, Loughshinny, and Rush....due in no small part to the efforts of the communities involved” were also noted. Some stakeholders referenced the impact on water quality from failures at other WwTPs, such “Sandon Dock WwTP, Liverpool, and the Buffalo Bayou WwTP, USA.”

### 3.2.21.1 Rivers and Watercourses

The location of a WwTP within the catchment of tributaries and watercourses that feed international significant and protected habitats was also raised as a concern and it was felt that it would not be acceptable given Ireland’s obligations under the Habitats Directive and Irish and European Law.

Many submissions made the point that “sites to the north are along the Ballyboughal River, which the EirGrid East-West Interconnector Assessment of Freshwater Aquatic Ecology states that in the lower stretches of the Ballyboughal River Brown Trout and Sea Trout have been observed.” Thus, “these freshwater habitats are classified as of high ecological value and as such are listed in the EU Habitat Directive as a protected environment.”

Other submissions stated that many of the proposed land parcels are adjacent to watercourses “used by farmers in the area to irrigate produce, which is then supplied to supermarkets” and consequently, they were concerned about the threat of pollution of these watercourses on their livelihood.

The *Fingal Development Plan 2011-2017* was also referred to by stakeholders and reference was made to “Sheet No.15, ‘Green Infrastructure,” which identifies a substantial number of ecological constraints for the land parcels in the Lusk area. It was felt “all four sites are in close proximity to watercourses and ‘Ecological Corridors along Rivers,’ as identified in the *Fingal Development Plan 2011-2017*. These watercourses and rivers are served by a network of streams, ditches, and land drains ultimately discharging to Rogerstown Estuary, a Natura 2000 protected habitat under the Habitats Directive.”

Rogerstown Estuary was cited by many stakeholders as being an important ecological area as it is a NHA, a SPA, and a Wetland Site of International Importance under the Ramsar Convention. It is also a Nature Reserve and a Wildfowl Sanctuary under the Wildlife Act 1976.

It was felt that “Rogerstown Estuary is ‘probably at risk’ on the basis of both point source, and morphological pressures. The most significant point source risks were considered to be municipal WwTPs and CSOs (combined sewer overflows) and the most significant morphological element was considered to be intensive land-use, according to the Eastern River Basin District project.”

Stakeholders also commented that the EPA have assigned the Rogerstown Estuary an interim draft classification of “Moderate” status, which means it must be improved to “Good” status by 2015, based on general physico-chemical elements, phytoplankton and macroalgal growths (reference was given to the ERBD, 2008).

As a result, it was felt that as the potential land parcels in the Lusk area, which range in distances from 0.8km to 2km from the estuary and the natural flow of the surrounding water courses, which are designated in the *Fingal Development Plan 2011-2017* ecological corridors, to the Estuary, “to locate a waste treatment plant in the areas as identified in the Lusk / Rush area will be severely detrimental to the further protection of Rogerstown Estuary and the ecosystems that it supports.”

In addition, an algal plume was identified under the Balleally Landfill was also identified as an issue that has a severe impact on ecology and that further increases the pollution load on the Estuary, which may have severe negative impact on its ecology. These comments were made with reference to the EPA inspector’s report on the current status of the Balleally Landfill. As a result it was felt that “given the impacts as regards existing communal waste facilities in the area of Rogerstown estuary it would be of the greatest negligence of the relevant county and environmental authorities if any additional load, or potential load was located in the environs of Rogerstown Estuary.”

It was also commented that “no risk assessments were conducted as part of the environmental report and as such is obsolete in assessing the impacts for the works on the Estuary.”

The natural watercourse flow direction into the Estuary was also cited as a potential issue as this flow is from the north, Ballyboughill River and Balleally, Bride, Jones, and Rush Stream West are all in direct proximity to the four selected land parcels, which some stakeholders felt “Fingal County Council and the SEA ignores.” It was commented that these water courses and the Estuary are protected in the *Fingal Development Plan 2011-2017* and was noted that Fingal County Council “had already set a precedent by deciding not to locate a football academy near Rogerstown Estuary because of potential risks to this protected site”, and that the County Manager applied the precautionary principle of the Habitats Directive. Rogerstown Estuary is “at risk” on the basis of both point source and morphological pressures.

### **3.2.21.2 Ground Water**

Ground water quality was a concern of some stakeholders, especially in relation to the Annsbrook land parcel. Some submissions noted that there is a “large ground water aquifer” in the region and they were concerned about the potential risk of contamination to this water source if an accident occurred at the proposed WwTP. It was requested that “locally important aquifers in the Annsbrook, Newtowncorduff, Tyrellstown Little, Rathartan, Baldurgan, and Cookstown areas should now be included as water and ecological constraints.” Concerns for contamination also related to livelihood, with many farmers worried about the water sources used for irrigation of crops. Another submission raised concerns that if these water sources are “contaminated in any way farmers cannot use the Bord Bia certification” and that “without this certification supermarkets will not accept produce for consumer safety”

### **3.2.21.3 Coastal Waters**

The majority of concerns relating to the water quality in the Irish Sea related to the outfalls. Many stakeholders worried that a drop in water quality would negatively impact on fishing and tourism activities. It was felt that “if the outfall pipe is to exit into our waters” the fishing grounds will be “destroyed.” Stakeholders stated that there will be “inevitable pollution” in the sea as a result of the proposal and that Northern Outfall is not “compatible with current and future commitments to biodiversity, and sustainability in context of the ongoing negotiations on the Common Fisheries Policy.”

Concerns were raised about the impact of silt build-up due to tunnelling and construction on local beaches. It was noted that the Malahide Estuary “suffered greatly from excessive silt on the seabed” during other construction projects and that Baldoyle Estuary and Portmarnock Beach may experience similar problems.

One stakeholder noted existing water quality issues from Barnageera, advising they have experienced health issues with their horses from the water, stating “we no longer can put one of the horses into the tide...each time she goes in she comes out with a major infection...this is all down to pollution in the water.”

It was felt the *ASA Phase 1 Report* “completely overlooked” the presence of wild razor clam fishery in the area. It was stated that as this species filter feeds, so concerns were raised about possible contamination of the clams as a food product.

Concerns were also raised about the impact of the outfall location on the on the “quality and safety of the water” for recreational use and that ongoing water quality issues such as the loss of the blue flag at Dollymount and the potential impact of low water quality along the Fingal would have on the tourism industry. Stakeholders were also concerned that their attempts to achieve a Blue Flag would be negatively impacted by the project.

#### **3.2.21.4 Tidal Flows**

Many stakeholders requested information on “tidal flows of the two areas selected for the discharge of the sewage along with confirmation of the distance out to sea of the proposed outfall.”

One stakeholder group commented that from their experience in the Southern Outfall area was that there are strong currents and tides around this area which make it “susceptible to ‘washup’ of litter on our beaches,” stating that from the amount and variety of this litter they felt that it came from “far and wide, both from within the Dublin Bay area and beyond it.”

They also went on to state that information derived from sailors and fishermen in the area all “attest to the vagaries of the tides in that area that confound the unwary.” It was also mentioned that a Scandinavian team had tried to understand the tides in the area in the 1990s but had given up in “despair” due to these vagaries.

Maps available on the Howth Yacht Clubs website were also used by stakeholders to examine the tidal flows near the Southern Outfall, stating that the proposed “discharge point of the marine outfall is directly in the path of this current, meaning that foul water, rather than being carried out to sea on the main tide, could be carried into and concentrated in, the stretch of water between Howth, Baldoyle/Portmarnock, Ireland’s Eye and Lambay and could also be carried around the Howth Peninsula towards Sutton Creek.”

It was also reported that the Islands and headlands in the area can create back eddies, which would have the effect of further distributing effluent within the area.

### **3.2.21.5 Outfall**

In general, it was felt that any outfall should be treated to tertiary level in order to avoid environmental impact. It was also commented that the *Fingal Development Plan 2011-2017* notes the presence of Annex 1 habitats along the Fingal coastline at the location of the proposed outfall. Some stakeholders commented that if the use of an outflow to the sea is unavoidable, then every effort should be made to ensure this is as far from the coast as possible.

#### **Southern Outfall**

Some stakeholders made specific comments in relation to the possible Southern Outfall location, indicating the environmental importance of the areas as demonstrated by the fact that “large swathes of the area, in Baldoyle, Ireland’s Eye and surrounding waters, and North Bull Island and surrounding areas, have been designated Special Protection Areas (SPAs) under Irish law.”

Other stakeholders commented that Portmarnock Beach now has a Blue Flag that took 20 years to regain and they were concerned that the water quality would deteriorate again due to the proposed plant. However, the same stakeholder also recognised that the situation had improved due to the WwTP in Ringsend.

It was also commented that “the proposed route of the outfall is through/under the Baldoyle Estuary and Portmarnock Dunes.” The Baldoyle Estuary is designated a Natura 2000 site, as well as a Ramsar site of International Importance. There was a request that an “adequate Appropriate Assessment will be necessary before any development can be undertaken which would affect the site. The effect of tunneling, and the vibrations involved, on invertebrates, the food sources of the protected species, is not known, and it may prove to be fatal to the system.”

The tidal currents in this area were also cited as being a potential issue and area addressed in Section 3.2.2.1.4 (Tidal Flows).

### **Northern Outfall**

The majority of issues raised about this potential outfall location were in relation to the fact that this area was not included in the Shellfish Designation as prescribed by the Department of the Marine and Natural Resources. This is covered in more detail in Section 3.2.5.3 (Shellfish Waters).

The Rush Angling Club commented that they feared, with the regular north easterly winds that occur along that part of the coast, the outflow from the pipe would end up on the beaches of Rush.

## **3.2.22 Other Issues**

### **3.2.22.1 Alternatives**

Some stakeholders felt that consideration of alternatives and alternative approaches was “completely inadequate,” with one stakeholder group commenting that they felt that as it stood it will “fall outside of the obligations of Fingal County Council to comply with the EIA directive.”

Four alternative sites were suggested by a number of stakeholders. The first being the lands located in the Nevitt area on “Council owned lands located at Toeman/Nevitt in Lusk, as “this site is 243Ha (600 acres) and all the onsite dwellings have been purchased already by Fingal County Council.” A stakeholder felt that “this site is more than capable of accommodating this proposed plant.”

The second alternative site suggested was the Silloge Golf Club, which is cited as being owned by Fingal County Council and is currently unused. It is situated close to M50 and “closer to the built up areas that are producing the wastewater.”

Balleally Landfill was the third site mentioned, with a stakeholder suggesting that it should be looked at as a potential site when it is closed.

The Deep Sea Port proposed for Balbriggan was also discussed as a potential site by several stakeholders, who felt that it would benefit both projects by being located in proximity of each other, sharing infrastructure and services.

One suggestion by a stakeholder was to build the plant in the Irish Sea, rather than siting it on valuable agricultural land or near people.

A number of stakeholders stated that they felt that “alternative options have not fully been explored.”

Additionally, many stakeholders felt that the alternative of multiple small plants rather than one large plant should be re-examined, particularly in light of newer technology and the potential to treat the effluent of multiple smaller plants to potable level and then use for consumption or release into water courses. This is covered in greater detail in section 3.2.11.2 (Multiple Smaller Plants versus One Large Plant).

### **3.2.22.2 ASA Phase 1 Mapping**

Several stakeholders made comments about the maps that were used as part of the *ASA Phase 1 Report* and in the information posters and brochures. The main issue was the omissions of certain housing estates, homes, and land demarcations on the maps.

One stakeholder listed the constraints that they felt had been omitted from the constraints mapping used in the *ASA Phase 1 Report*. For the several of the land parcel maps the stakeholder stated the following were omitted: “the Commons” (Rural housing cluster to the North West), over 60 houses, The Cottage Playschool, Rush Educate Together School, the new secondary school that will be built in 2013, the proposed Lusk Community Centre, horticultural businesses in the northwest and northeast, acres of greenhouse to the northwest and northeast, and rivers and streams to the west and south east. On the map for Newtowncorduff it was stated that the Dun Emer housing estate was omitted.

A number of stakeholders commented that the “South Beach” in Rush was also not on the maps also.

One stakeholder requested that fig 4.1 be redone to indicate separate pipeline corridors for the proposed Northern and Southern Outfalls, as they felt the diagram was “crowded and misleading.”

### **3.2.22.3 The Planning Process**

Some stakeholders commented that they felt the process for this stage of the project “lacks legitimacy due to the fact that stakeholders are unable to adequately test the evidence behind the decision-making process.”

This perceived lack of information was compounded for some stakeholders who noted that “little detail has been given about the plant itself” and that there has been “no definitive information given on important issues such as tertiary treatment, odour containment measures, de-chlorinal, and ultraviolet treatment.”

It was commented on by a stakeholder that they felt there was a “democratic deficit” in the decision making process for this project as “local representatives have been cut out of this proposal.

## 4 NEXT STEPS

The issues raised during the public consultation and scheduled in the *ASA Consultation Report* have been reviewed by the Project Team and considered as part of the assessment process to identify the emerging preferred site options. Details of such considerations will be included in the *Alternative Sites Assessment and Route Selection Report (Phase 2): Emerging Preferred Sites and Routes*.

Where specific sites, features, or constraints, locally known or otherwise, were identified in stakeholder submissions, these have been checked by the relevant specialists to ensure they have been included in their assessments. Where any listed sites, features, or constraints have not been included, the relevant specialist has been required to clearly detail to the Technical Team the reasons and justifications for this.

The next phase for the project will focus on the identification of emerging preferred sites and will take place in the coming months. In accordance with the Project Road Map (Figure 1.1), an *Alternative Sites Assessment and Route Selection Report (Phase 2): Emerging Preferred Sites and Routes* will be published (Step G) and the emerging preferred sites, along with the associated pipelines and marine outfall locations, will be brought out to public consultation (Step H). Once the ASA Phase 2 Consultation closes (Step H), the Technical Team will consider all feedback and move towards selecting a preferred site (Step J), publishing the *Alternative Sites Assessment and Route Selection Report (Phase 4): Preferred Site and Routes*. An Environmental Impact Statement will be prepared on this preferred site, the associated pipelines and marine outfall location (Step L). Finally, a planning application for the full project will be made directly to An Bord Pleanála (Step M). There will be a full statutory consultation process as part of the submission of the planning application (Step N).

Fingal County Council would like to thank all participants for their feedback and look forward to future engagement with them on the future development of Greater Dublin Drainage.